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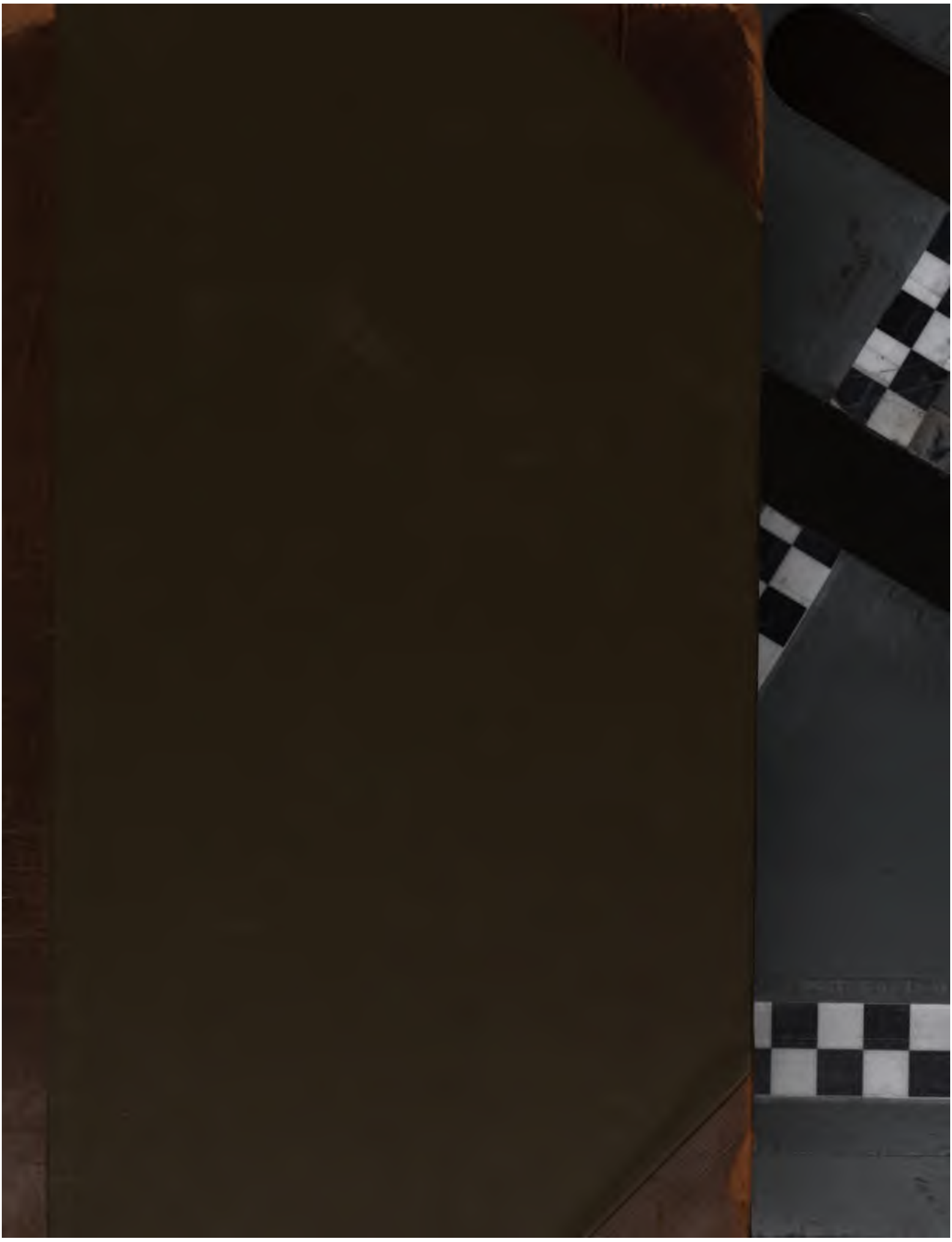

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GENERAL VIEW

OF THE

AGRICULTU

IN THE COUNTY OF

SOMERSET;

WITH OBSERVATIONS ON THE MEANS OF IT

BY

JOHN BILLINGSLEY,

ASHWICK GROVE.

DRAWN UP FOR THE CONSIDERATION OF THE BOARD
AND
INTERNAL IMPROVEMENT.

LONDON:

PRINTED BY W. SMIT

M.DCC.XCIV.

S455
A2
v.4
no.1

SOMERSETSH
Green
Yellow
Dark Blue
Purple
Brown
PORLOCK
Selworthy
Luckham
Timberscombe
Exford
Cutcombe
Withypool
Winsford
Hawkridge
DULVERTON
Brushford
Exmoor
Forest
Engraved for MILLINGSLEY'S Agricultural Report.

Entered at Stationers Hall.

TO THE READER.

IT is requested, that this Paper, may be returned to Board *of Agriculture, at its Office in London, with any ad* ional *remarks and observations, which may occur on the peru* ritten *on the margin, as soon as may be convenient.*

It is hardly necessary to add, that the Board does onsider *itself responsible for any fact or observation contai* this *Report, which, at present, is printed and circulated,* e *purpose merely of procuring farther information, respect* e *Husbandry of this district, and of enabling every one,* ntribute *his mite, to the improvement of the country.*

The Board has adopted the same plan, in regard to e *other Counties in the united Kingdom; and will be hap* give *every assistance in its power, to any person, who m* desirous *of improving his breed of Cattle, Sheep, &c. or* ying *any useful experiment in husbandry.*

LONDON, NOVEMBER, 1794.

INTRODUCTION.

IN mildness of climate, fertility of soil, and general produce, the COUNTY OF SOMERSET stands eminently high in reputation.

The richness of its pastures furniſhes not only a ſufficiency for its own consumption, but also a conſiderable ſurplus for other markets.—London, Briſtol, Salisbury, and other parts of the kingdom are annually ſupplied with fat *Oxen*, *Sheep*, and *Hogs*, together with *Cheeſe*, *Butter*, and many other articles in great quantities.—Nor are its *internal* riches of leſs importance—From its bowels are dug *Lead*, *Copper*, *Iron*, *Lapis Calaminaris*, *Coal*, *Fullers Earth*, *Marl*, *Lime Stones*, *Paving*, *Freeſtone Tiling Stone*, &c. &c. in great abundance.—In ſhort, it may juſtly be denominated a *highly productive county*.

Its dimenſions are about 80 miles by 36, and its circumference about 200 miles. In ſuch an extent of ground, it may naturally be ſuppoſed, that the ſoil and climate are various. Near the ſea coaſt winter is ſcarcely felt; and from Minehead and Dulverton on the weſt, to Milborne Port and Wincaunton on the eaſt, the climate (Quantock Hill excepted) is temperate, and the ſoil, for the moſt part, rich and fertile. As you approach the northern diſtrict and aſcend Poulden Hill, the climate changes, and becomes more cold and boiſterous; and when you proceed farther northward, and gain the ſummit of Mendip Hills, you feel yourſelf comparatively in Lapland. The perpendicular altitude of Mendip Hills, compared with the town of Taunton, I conceive to be at leaſt three hundred yards.

For the ſake of perſpicuity, I ſhall divide the county into three diſtricts. The firſt comprehending that tract included between the ports of Uphill and King Road on the weſt, and the towns of Bath and Froome on the eaſt. This I ſhall call the *North Eaſt Diſtrict*.

The next diviſion I ſhall call the *Middle Diviſion*: and is that portion of land which is bounded, by the Mendip Hills on the

north, Bridgwater Bay on the west, and the town of Cha
south.

The *South West Division* will occupy the remainder.

NORTH EAST DISTRICT.

THE surface of this district being very irregular, and in
with lofty hills, and rich fertile plains, the climate is con
exceedingly varied. On the western side, including the
of *Winterstoke* and *Portbury*, the soil is, for the most part,
and rich mixture of clay and sand; being originally a de
the sea, which, in ancient times, flowed up a considerable
that part of the county. These Moorlands, as they are ca
at the present time subject to frequent inundation; and so
in rainy seasons, are covered with water for four or five s
months. The luxuriant herbage produced by these lan
cleared from stagnant water, is such as to induce, in the m
man fond of national improvement, an ardent wish to
completely drained.

This I think might be effected in the following way
sluice or dam be built at the outlet of the river Yeo or
apron of which should be placed near low water mark.
necessary to describe these sluices or outlets, as they are co
most counties bordering on the sea. Suffice it to say,
buildings are furnished with folding doors, which shut at
of the tide, and open on its retreat. From a sluice thus er
the bed of the river be lowered to an inclined plane of one
mile. This is sufficient to produce a current, and it wil
any great deposit of sediment. Let the bottom be contrac
breadth, so that the water in time of floods may run with
rapidity to cleanse it of mud. In regard to the dimension
pence of such a main drain, the reader shall be informed
come to treat of Sedgmoor.

In the parishes of Congresbury, Yatton, Banwell, Wi
Churchill, and Puxton, there are not less than three thous
subject to frequent inundation. All these lands disch
greatest part of their waters into the river Yeo, and are u
i

inspection of the Commissioners of Water Sewers; but the powers, vested in these commissioners by parliament, are not sufficient to enable them to divert the course of the river, or to effect a radical cure.

The tide flows nearly seven miles up the river Yeo: and at six miles from the mouth of the river, the spring tides flow five feet above the level of the adjacent lands.

This would be effectually prevented by the dam before mentioned; and by cutting proper lateral drains, the whole district might be advanced in value 10s. or 15s. per acre: and all this might be done at an expence which two years profit would reimburse. Nothing is neceſſary but effectual draining to make it as good land as any in the county. It requires no dung or any extraneous manure; but may be kept in good heart by the contents of the ditches.

To the northward of this district lie the parishes of Kenn, Kingston, Seymour, Cleveden, Nailsea, Chelvey, and Claverham, poſsessing near four thousand acres, alike subject to inundation.

These parishes are secured from the sea by a wall, built with stone and lime, and elevated ten feet above the level of the land within. High tides sometimes overflow this wall, and when a strong westerly wind prevails at the equinoxes the wall is frequently broken down by the impetuosity of the waves, and large portions of the land are covered.

Should this happen at the autumnal equinox, little injury is done. But if in the vernal, it kills the best grass, and the crop of the ensuing summer is worth but little. These lands discharge their waters by two rivers called the little Yeo's. At the mouth of these rivers are sluices, such as before described, which prevent inundation *from the sea:* but being not made deep enough at their outlet, and the rivers, by which the waters are conveyed, not being properly bottomed, the country is subject to frequent *land floods.* This level is susceptible of the same improvement, by a complete drainage, as the former.

Proceeding northward from hence you ascend Leigh Down. This is a tract of elevated land, extending from Cleveden to the Hot Wells, near Bristol. It is principally fed with sheep, and consists of about three thousand acres. A large portion of this

Down will not admit of cultivation; the Limestone
within two or three inches of the surface. It is proba
land will pay more as pasture than any other way. I
inconvenience arises from the unlimited right of st
which it is burthened with double the number it ought
breed of neat cattle is greatly injured, and, in respe
the quantity of wool lessened, though it must be admit
quality of such wool is improved in respect to *fineness*.
trate this observation respecting over-stocking, I shall
in point. A farmer of this district some years since
five head of steers and heifers into a ——— piece of
land. The spring being unfavourable to the purcha
and a considerable fatality having prevailed the prece
the common was *moderately* stocked; in consequence
profit of 2l. per head was made between the months
November. Encouraged by this success, and flatte
with the prospect of similar profit, he purchased the n
head: but others following his example, he, to his g
cation, found that, instead of profit, he suffered a lo
one hundred pounds.

From these premises may it not be fairly inferred,
closing and *dividing* of commons, even in cases where
cannot prudently be introduced, is beneficial both to th
and the public; as the owner can then apportion his
quantity and qnality of his land, and can have them
under his eye. But of this subject more by and by.

At *Clapton*, a village lying to the north west of I
there is a coal work which possesses the advantage of
of forty-four fathoms. At this pit are landed about
daily. The best coal is sold at threepence-halfpenny
and the small is shipped at Portishead point for Wales
used for burning lime.

South east of Leigh Down is a vale of rich grass la
ing from Bedminster at the north east, to Brockley an
the south west.

Under this level are supposed to be inexhaustible v
At present they land 2500 bushels a day. The best co
threepence-halfpenny, the middle sort at threepence, a

at twopence, per bushel. One of the works is under contract to serve the glass-houses, some time since erected in the parish of Nailsea, at one penny farthing per bushel.

These glass-houses consume about 2000 bushels weekly. The deepest work is 42 fathom. The principal vein is five feet thick; sometimes more. The coal takes a south *pitch* or inclination never exceeding two feet in a fathom. Little timber is used; but they are much incommoded with water; for the rock which lies above the coal so abounds with fissures, that there is no method of preventing the *land water* from pervading the bottom of the works.

When the top veins are exhausted and the proprietors are compelled to go deeper, it is a matter of doubt whether any power of a steam engine may be competent to the task of keeping them dry.

A scheme is on foot to make a canal from the city of Bristol through this vale to Loxtone, near Axbridge; and from thence to the town of Taunton: but whether it will be carried into execution, or abandoned, time only can tell.

The lands in this vale are very fruitful; and a considerable part thereof are the property of two gentlemen of fortune and respectability. These gentlemen, from the the beſt of motives, have been long in the habit of letting their estates at the old rents, though the price of the articles of produce has in the course of thirty years advanced one third *at least*.

How far such acts of kindness may be considered as just to a man's family, or conducive to the public weal, I much doubt, from the experience which I have had in the agricultural world, I have invariably found lands so occupied, in a much worse estate, than those of neighbouring farmers, *moderately advanced*.

An equitable partition of the advantages, resulting from an increase of trade and population, cannot by any reasonable tenant be objected to. The one system produces *care* and *exertion*—the other *indolence* and *sloth*.

Let us now return to the south-west, and survey the parishes of Churchill, Hutton, Banwell, Locking, West-Super-Mare, and Uphill, &c. &c. &c.

These lands are for the most part occupied by dairy f
farmers; and are subject to frequent overflowings of
which runs through a dam or sluice at Uphill. It is
that if the bed of the river at Uphill, and the sluice thro
the water is discharged, were deepened three feet, the
in a great degree be removed.

Mr. Good, who occupies a large farm in Hutton, has
of making cyder, which it may not be amiss to descr
apples are ground by a horse-mill. The pummice is t
in hair-bags; after which it is put into a tub and chopt.
ground over again, and made into a cheese, which st
press all night.

In the morning the press is strained as tight as it w
a lever or cap staff: by these means the cheese is made so
it is cut into narrow strips, tied up in faggots, and burnt
make one hogshead upon eight more than by the comm
Two men make and tun five hogsheads in a day, and
will grind the apples in three hours.

Query. Is not the quality of the cyder injured by
expression?

As we are now about to quit what is called the North
shall advert to the queries proposed by the board.

The soil of this district I have already described.
climate it is rendered so mild and temperate, by th
of the sea, that neither frost or snow are of long dura
unless chilled by too much moisture, it may boast a
verdure.

Part is possessed by large proprietors and leased out on
is in demesne and let out for short terms, and no small
the fee of the occupiers, constituting a most respectable
whose sway is strongly felt at a contested election.

The farms are not large, seldom exceeding two hund
a year, and accompanied with a very small proportion o

The artificial grasses are broad clover, marle grass,
Alpestre) white Dutch and ray grasses.

The stock, partly cows for the dairy, and partly
fatting—both good of their kind.

As corn is but little attended to, it is scarcely worth while to take any notice of their course of cropping, or of any thing that relates to tillage.

There are many woods in this district, the largest is Kingswood, which covers about 230 acres. Fences very much neglected, and over many of the woods the cattle freely range.

The timber is chiefly oak, but does not get to any large size; the woods being, for the most part, situate at the declivity of the hills, where there is but little depth of earth. The underwood is cut for wreaths or faggots. The valleys are in general richly laden with elm which grows spontaneously in the hedge-rows, and gets to a good size. The method practised here of lopping off the side branches, to what is called a besom head, cannot be too much execrated. It is destructive to the growth of timber, and by lessening the agitation produced by winds deprives it of what may be deemed its salutary exercise. The effect of cutting off the lower branches is a premature decay which first takes place in the top of the tree, a general check is given to the circulation of the sap, and it reduces the tree nearly to the state of a pollard.

Neither the roads nor farm houses can be boasted of. No manufactures. The poor principally employed in husbandry, fishing, &c.

The principal improvement that can be suggested is that of draining their *low* lands, and folding sheep on the *high* land.

The next portion of the northern district of which I shall treat, is bounded on the west by Bristol and Wrington, and terminates at the eastern boundary of the county; and on the south by the Mendip Hills, (inclusive.)

The soil of this district frequently changes, but the climate can vary but little; and the uniformity of atmospherical influence is preserved considerably by the land rising rather gradually northward and southward, and the western breezes blowing on the vale greatest part of the year. On the whole the region is favourable to vegetation and agriculture in general; under great part is good marle at no great depth: many great proprietors from 2 to 6000 pounds per annum, but still the greatest part is possessed by the middle class, holding from 50 to 500 pounds per annum. It is also principally occupied by middling farmers, few renting

more than two hundred pounds a year, and is in
bandry.

The artificial grasses are sainfoine, ray, broad cl
grass, white Dutch and hop clover, or trefoil.

The stock—cows, oxen, horses, sheep, pigs. As th
all devoted to the dairy, preference is given to that
gives the most milk and of the best quality; or, in t
language, to that stock which makes the most *goods*, wh
butter, or cheese, or both: hence it follows, that in p
case they are very deficient. They are mostly of the sh
breed; and though the fine long horned cows of nort
have been tried, and strongly recommended by some,
neral run of dairy men are strongly attached to their ow

As this is a subject of some magnitude, let us bestow
moments attention.

In the choice of stock, the buyer should principally
the purposes for which that stock is designed, and to the
quality of his land.

If his principal object be rearing, either with a view
self or to sell to others, the form, or shape of the p
should first be regarded.

That frame of body which is accompanied with the g
tion of valuable flesh, and the least offal, is to be prefer

An aptitude to fat in youth is also an object of great
By an attention to these points, the great farmers of L
and other counties, have so attracted the notice
breeders, as to sell their stock at a price scarcely cr
plain old fashioned farmer. But however we may a
care and ingenuity, does it follow that we are to be le
the extravagant ideas which some people entertain of th
rity. A heifer of three or four years old, which discov
sition to fat, seldom proves a good milker, and is by
turned out of the dairy. Beside, I have been inform
great breeders are frequently obliged to have the a
Welsh nurses for their calves, through a deficiency of
parent animal. Is this a recommendation of them to
man? As a confirmation of the idea that handsome st
dom good milkers, I shall advert to the North Devon

I believe in all other respects, there is not a more valuable in the kingdom.

In *that* part of the kingdom little attention is paid to cheese or butter, but if a cow produces handsome stock it is all that is required of her; and it frequently happens that a farmer, with ten or twelve cows, has but little more of those articles than is sufficient to supply his family.

The Somersetshire dairy-men generally keep their *good* cows till they are ten or twelve years old; at which time their value is reduced to four or five pounds each. A long horned cow at that age might be worth eight or ten pounds; (I mean of the middling breed) here is then an apparent deficiency of four or five pounds; but when we reflect that the keeping of one is worth ten shillings a year more than the other, the loss is not so apparent; and if we admit that the short horned will make half a hundred of cheese more per year than the long horned, the ballance of profit is then in favour of the former.

I do not mean by what I have said to detract from the merit of Mr. Bakewel, or other great breeders of the north. I only wish to recommend a discriminating principle, and to deter the credulous farmer from too *hasty* a dereliction of principles and practices, founded in experience, and to which he has been long accustomed. I may be here told that the foregoing premises, from which conclusions are drawn unfavourable to the long horned cow, are delusive; that a north country breeder will laugh at the idea of keeping a cow till she is ten years old; that at six years, or at the farthest at seven, she ought to be in the possession of the butcher. But coolly and calmly; ask a practical cow-keeper at what period of life a cow makes the most goods, and he will tell you between the age of six and twelve years old. I have known cows continue good milkers till they have past their twentieth year.

I beg pardon of my readers for this digression, and will now return to my survey.

When *cheese only* is made, the annual produce per cow is from three to four cwt.

Many dairies, in the vicinity of Bath and Bristol, make butter and half skimmed cheese; in either way the annual produce per

cow is from seven to ten pounds, including the calf a
pigs.

From three to four acres of land will keep a cow
the year.

The watering of pastures is not much known, thoug
tage resulting from that practice in neighbouring cou
questioned.

The *intermixture* of lands embarrasses the operation o
in that respect, and this seems likely to prevent a pract
coming more general, which numerous springs and ri
otherwise favor.

The water issuing from Mendip Hills is unfit for t
carrying with it noxious mineral particles destructiv
tion.

Grain principally cultivated are wheat, beans, peas
a little barley: but for the latter, the soil is for the m
favorable.

In the parishes of Wrington, Blagdon, Ubly, Comp
and Hartry, *teasels* are much cultivated. The head c
which is composed of well turned vegetable hooks, is u
sing of cloth; and the manufacturers of this county a
for the most part supplied from these parishes.

Large quantities are also sent (by water conveyance
into Yorkshire.

As this is a plant not generally known I will describ

The most favorable soil is a strong rich clay, or w
rally denominated good wheat land.

Sometimes an old ley is broke up, and sometimes a
ble, the seed is sown (after the rate of two pecks per
month of April.

During the summer the land is worked over three
with long narrow spades to destroy the weeds.

In the month of November, if the plants are too th
drawn out to fill up vacancies; and the plants are set
tance. If after this thinning too many plants remain,
is prepared, into which they are transplanted; but
which are never moved produce the best heads.

At the next spring and ensuing summer, the land is worked over three or four times with the narrow spades; by which it is kept thorough clean, and the plants earthed up.

In the month of July the uppermost heads begin to blossom, and as soon as the blossom falls, they are ripe. The gathering is performed at three different times. A man, with a knife made for the purpose, cuts the heads which are ripe, and ties them up in handfuls. After a fortnight, he goes over the ground again, and at a third cutting the business is compleated. On the day of cutting they are carried into a house; and if the air is clear they are taken out daily and exposed to the sun, till they are compleatly dry; but great care must be taken that no rain falls on them.

The crop is very hazardous. A wet season rots them, particularly when there is much rain at the time of blossoming.

In the year 1792 there were few worth harvesting. The crop this year is but indifferent. When dry they are separated into three different parts called kings, middlings, and scrubs; and are after that made into packs, containing of kings 9000 heads, and of middling, 20,000. The scrubs are but of little value. The average price is forty shillings per pack; and sometimes the produce is fifteen or sixteen pack an acre, at other times a total blank. There is an amazing inequality in the produce of different plants; some stocks will send forth 100 heads, others not more than three or four.

Should not great attention therefore be paid to the selection of seed, namely by taking it from those plants which appear to be most prolific? This however is not done; but the seed is taken indiscriminately from the whole crop.

As the goodness of the crop chiefly depends on the care taken to keep the land free from weeds, leaving the plants at proper distances, and earthing them up well; and as most of the common workmen will pay more attention to their own, than to another person's interest, it frequently happens that a partnership is formed between master and man. The former finds *ground and ploughing*, and the latter *seed and labour*.

At harvest the crop is divided, and each party takes a moiety. The expence and produce of teazels may be thus estimated per acre.

To

	£.	s.	d.	
To two Year's Rent .	3	0	0	By Average Prod
To Plowing . . .	0	15	0	
To Workmen's Labor	3	15	0	7 pack at 40s.
To making out in bundles, tying together, and teazle bands, 2s. per pack	0	14	0	
	8	4	0	
	5	16	0	Profit
Tythe and Taxes excepted	14	0	0	

The working with the spade can only be done to ad the men accustomed to it, who are become by habit in the use of this implement, that they will even thin ou carrots.

The common hoe has been tried, and, though in th compleat turnip hoer, it was not found to answer.

After the crop wheat is sown on one plowing, and s of a good produce; so that it may not be quite fair to teazels with *two* years rent.

Few soils will bear frequent repetitions of this cro farmer finds it his interest to devote newly broken up culture.

As the soil of this district is partly clay, red earth brash, the rotation of crops varies.

ROTATION OF CROPS.

On the CLAY *it is*

1st Beans	or	1st Beans (hoed and
2d Summer Fallow . .		2d Wheat . .
3d Wheat		3d Winter Fallow
4th Oats		and
5th Oats and Grass Seeds		Oats with artificial

Or

1st Teazels
2d Wheat
3d Beans
4th Oats

On the Red Earth.

1st Oats on the Lay
2d Summer Fallow
3d Wheat
4th Oats
5th Oats
6th Oats and Grass Seed.

Sometimes the grass seeds are sown in the second crop of oats after a winter fallow.

On the Stone Brash.
(That is the land abounding with marl)

1st Wheat
2d Wheat
3d Wheat
4th Barley and clover
5th Clover

Of this soil and its management I shall treat more particularly hereafter.

Fallowing is generally practiced in all these soils; for, as turnips are little known, the farmers are obliged to have occasional recourse thereunto, to clean their land, made foul by successive corn crops.

The common manures are marle, lime, farm yard, and stable dung. In some parts near the turnpike road, which is mostly made with lime stone, the scrapings of it are mixed with dung; and this manure is well adapted to pasture land, bringing a luxuriant carpet of white clover.

The ploughs commonly used are strong single ones; sometimes with one small wheel, sometimes with a foot only. The great length of the mould board occasions too much friction; and it cannot be deemed a good implement: but prejudice is strongly in its favor, notwithstanding considerable pains have been taken to shew the superiority of other ploughs.

The carts are mostly large and strong tumbrels for the uses of husbandry; but the shape varies in different parishes.

The

The waggons are small, compact, and well ma
wheeled weighing from 15 cwt. to 20 cwt.: the six
from 25 cwt. to 30 cwt.: the latter drawn with six hor

Some years ago waggons of this description wer
6 cwt. heavier than they are now. The reduction of
particularly to those who are common carriers is hi
tageous, being not less than fifty pounds per year
team constantly employed on the road; and, if mad
materials, a *light* waggon will last as long as a *heavy* o

Horses and oxen are used for ploughing in about e
tion; sometimes both are used together: oxen mostly i

Usual seed time for wheat, the months of Octob
vember. Beans and oats in February and March, a
April.

Wheat harvest in August; barley and oats in Septe
as late as October.

Few farmers agree in opinion respecting early or
and perhaps no fixed time can with propriety be establ
success, or otherwise, depends so much on fortuit
stances, such as the wetness or dryness of the season,
ratare of the air, both at the time of sowing and afte
is successful one year is quite the contrary the next.

The following rules may I think be safely followed
wheat before the month of September, nor later than

Not to sow till the ground is properly moistene
close and firm by rain.

After the middle of February whenever, the land
spring crops is dry and healthy; begin planting beans,
oats; and under the same circumstances let all your
the ground before the middle of April.

In this district there are many commons uninclose
cipal of which are Broadfield Down near Wrington,
down near Bath. The former contains 2500 acres, ar
most part. a good soil deep in earth and easily ploughe

Surely the inclosing and cultivating a tract like
only eight miles distant from the city of Bristol, cou
being a great advantage to the proprietors; parti

abounds with excellent lime-stone, and the coal-pits are only a few miles distant.

Lansdown comprehends nearly 3000 acres; but as the soil is thin, and the surface perfectly smooth, and remarkable for its excellence in feeding small sheep, to which it imparts a delicate flavour, it might not be prudent to break it up, especially as it affords a luxurious and beautiful ride to the sojourners in Bath.

Inclosing has been of long standing in most of these parts, Many have exemplified an advance of rent more than two thirds. The produce in many instances has been of wheat 30 bushels, barley 40, oates 50, and beans from 30 to 40 per acre.

Increase of population in proportion.

SIZE AND NATURE OF INCLOSURES VARIOUS.

Nature of fencing: quick hedges, with trees at unequal distances. And, where stones are easily got and lie in a flat bed, stone walls, without cement, are built; two feet wide at the bottom, eighteen inches at the top, and five feet high; the total cost of which wall is about one shilling per yard running measure.

I shall bring forward a comparative view of these walls with quick hedges, when I come to treat of the inclosures on Mendip Hills.

The rate of wages in hay and corn harvest is about nine shillings per week, with dinner and beer; other parts of the year about seven shillings, with small beer or cyder.

Time of labour in the summer from six to six, in the winter from day light till it is dark.

Not so much attention has been paid to the draining of land as the object undoubtedly requires; but in some cases, where inclosures have been accompanied with a weeping surface, great improvements have been made by stone draining. The acclivities from the vales are for the most part of this quality and complexion, and if the springs, which issue from the sides of the hills, were taken off at their head by judicious drains, and diverted into a proper channel, the value of the land would be risen at least one third.

Paring and burning but little in use.

The country is but partially wooded, and on ac
demand from the collieries the wood is but very ir
Systematic plantation is but little studied.

As to the price of provisions, wheat is about six
bushel, barley 4s. 6d. oats 3s. 3d. beef 4½d. per lb.
pork 5d. butter about 9d. and cheese (six month
40s. per cwt. No particular reason to expect a fluctu
in the articles of barley and oats) unless the plagu
which defies all human estimate, and deforms the fa
should extend its baneful influence to this isle, form
tranquility and happiness within itself.

Public roads pretty good, considering the traffic
Parochial ones ill managed, and bad; notwithstand
terials for keeping them in repair are near and ab
some examples are beginning to be set of more judic
ment, by throwing the sides to the middle, thereby
space of passage, and making drains at both sides.
*. This obvious piece of œconomy cannot be too muc

Farm houses are generally ill built, and situated
perly in respect to the farms. Estates are frequently
to year. Leases in general for seven years, few for fo
clauses mostly favourable to the tenant, but the sh
term damps the spirit of improvement.

Commerce and manufactures have but little atte
district. There are indeed several mills on the Avon
iron and copper, but of late years they have decl
consequence; most probably from local disadvantage.

Since these works have been declining, sundry c
spinning of worsted, and the spinning and weavin
have been established; and seem yet to maintain som
though under a temporary depression from political
effect on agriculture in the article of wages has been
the pay of men in time of harvest has been greatly a
that of women and children doubled.

There is one article of cultivation in this district,
important as it relates to the woollen manufactory,
omitted; it is the plant called woad. It is raised
the neighbourhood of Keynsham, and its quality is mu

The farmers who raise it have an opinion, that the parish of Keyasham is particularly favourable to the growth and perfection of it: but this is most likely a vulgar error; for experiments are attested of as good crops elsewhere. The soil must be strong and good where it flourishes; it delights most in a deep fat loam, which must have so much sand as to admit of easy pulverization. As the excellence of woad consists in its size, and the succulency of its leaves, it requires careful management, as well as a rich soil. It is most commonly sown on land fresh broken up; and on narrowish ridges.

The first ploughing should be against winter, the second in the spring, when the ridges should be formed; a third in June, and the last in July, or very early in August, just before the sowing of the seed. In the intervals of the ploughing, harrowing should take place, to destroy all weeds. The seed is commonly sown by the best farmers in drills, for which purpose the surface should be harrowed very fine and level. The plants in a moist season appear in a fortnight, and in two or three weeks after are fit to hoe: they should be hoed out clean to the distance of about six inches at least, some prefer a greater distance. In this neighbourhood hand weeding and thinning are frequently used; and at the employ, women and children earn very high wages, especially since a cotton manufactory has been introduced in the parish. The success of the crops depends much on the hoeing and weeding, so as to keep the ground fresh and clean. Thus managed three or four crops or gatherings will be produced in succession; but the first two are the best. The time of gathering is determined by the full growth of the leaves, and the first appearance of change of colour at the extremities; and this rule of course governs the succeeding crops.

The leaves are cut by hand and gathered into baskets by women and children, who carry them to a very deep large cart at the edge of the field. After two cuttings the crop is suffered to go to seed for the next year, if seed be wanted; but if only one crop is taken the seed will be the finer. When the pods turn of a dark colour the seed is deemed ripe. The stalks should then be reaped like wheat, and spread abroad; and if the weather be favourable the seed will be fit for threshing in four or five days.

When the green crops are carted home, the plant is t
a mill, constructed with a heavy iron ribbed roller, som
that which is used for bruising bark and other substanc
process it is cut and bruised to a pulp. It is then la
heaps, pressed close and smooth; and as the crust for
outside cracks, it is closed again to preserve the stren
substance. After lying about a fortnight in this state
are broken up; the outside worked into the mass, and
formed by the hand, and sometimes by wooden moulds
balls; which are then dried on hurdles under a shed ex
sun.

They turn black or of a dark brown on the outside
manufactured; and are valued in proportion to their spe
and a purplish cast in the inside. Thus they are sold t
and it is scarcely necessary to add further, that the use
cle in dying consists in forming the ground of the indigo
crop is generally a profitable one. The quantity per
ton and half. The nett profit of course must be gove
goodness and price of the article. But it seems on an
be so lucrative a culture, that few farmers who can r
discontinue the practice. It however exhausts the la
ingly, and more than two years crops must not in gener
To this crop succeed wheat and beans.

I shall now proceed to a description of that system o
ment for which this district is remarkable. I mean t
system.

The parishes of Midsomer Norton, Stratton on the
mersdon, Radstock, Timsbury, Farmboro', High Litt
ton, Stone Easton, and Chilcompton, comprehend a
land, part of which is rendered remarkably fertile by t
tion of marl.

The soil consists of an earth more or less loamy, of
lour, between brown and red, with a prevalence of
other; very stony, resembling that kind of soil usua
nated corn grit, and naturally so barren, that when
field at the beginning of the present century the lands w
at more than 3s. 6d. per statute acre.

By a moderate computation this soil may be said to occupy in the parishes of the district an average proportion of at least one third. At a variable depth from the surface an inexhaustible store of black marle is constantly found, which from properties equally singular as to fertility and duration, has advanced the lands from 3s. 6d. to 1l. 11s. 6d. per statute acre; and this too with a very liberal allowance of profit to the occupier.

This valuable manure is raised in the summer, at the average depth of about seven fathom, by sinking a pit or shaft, the sides whereof are secured by timber props, interspersed with wreaths of brush wood.

The first bed of marle perforated is blue, two feet thick, of a stiff consistence, and on repeated trials found altogether useless. Below this lies a stratum of stone, nine inches thick, and of a blue color; next to which is found a bed of marle, from three to four feet of thickness, nearly horizontal, of a color approaching to black, and, towards the lower part, of a shelly substance; the greater predominance whereof is found proportionably to improve its fertilizing property.

The expence of raising it, including that of sinking the shaft, is from six-pence to eight-pence per cart load of twenty-four bushels. That, and carting out, spreading, and brushing in, twelve shillings per statute acre. Forty load is an ample dressing for a statute acre, which at eight-pence per load amounts to

	£.	s.	d.
	1	6	8
Carting, Spreading, &c.	0	12	0
The whole	1	18	8

For which a manure is obtained that secures a luxuriant undiminished vegetation not requiring any further assistance from thirty to fifty years. The generation of moss manifests the declining effects of this manure. It is considered as an indication for breaking up the old sward, which is generally done. This developes a very curious and singular phœnomenon; namely the marle spread on the surface forty or fifty years before has only obtained the depth of between five and six inches, where it forms a regular uniform

uniform consolidated bed. Even at this depth its ef
not exhausted, are nevertheless so much impaired as
renewal. Will not this fact tend in some degree
Modus Operandi?

While it remains within two or three inches
which is the case in some instances perhaps for t
more, it may be supposed to form a kind of pan or r
nutritious and fructifying influences deposited by th
which being *there retained*, and in *contact* with th
grasses, form such combinations in the laboratory o
best adapted to give vigor and permanence to the el
ciples of vegetation. These are evidently weake
marle, by its descent, gets below the roots of th
thereby deprives them of the matrix, which seems
means of their nutrition and support. This may
production and increase of moss on the surface, and
marling afresh, not only to impede its propagation,
it.

It is observable that when marle is laid on this
which accompanies an old sward, to avoid a course
improvement is not equal to that of laying it on c
grass, the second year from the time of sowing.

An inconsiderable portion of these lands is empl
under the following course of cropping.

1st Year—Old sward ploughed up in August.
Wheat—Harrowed in October and th
November on one earth.
Produce from 25 to 30 bushels (8 gall
2d Year—Wheat—Single ploughing harrowed in
Produce from 30 to 35 bushels.
3d Year—Wheat often.
Produce from 25 to 30 bushels.
Sometimes barley with or without fall
Produce 56 bushels.
4th Year—Peas with two or three ploughings
Produce from 20 to 25 bushels.
Then winter fallow as a preparation fo

5th Year—Barley and clover or marle grass,
Produce 48 bushels.

6th Year—Clover or marle grass.
When mowed, produce from 30 to 40 cwt. per acre.

7th Year—Clover or marle grass fed.

Defective and ruinous to the land as the three first year's rotation of crops may appear, it is nevertheless with little variation uniformly pursued; and with little abatement of produce is renewed for another seven years succession. Even a third is carried through by many farmers, accompanied with fallowing for some of the wheat crops, and assisting the land by a sprinkling of Barton manure. Even a fourth succession, with less wheat and more barley, is carried on by a few considerable farmers in the district; but from the levity of the soil, and the difficulty of keeping weeds under, the crops fail notwithstanding a more liberal use of Barton manure.

A system of cropping, so very perverse and erroneous, carried to such a length on land rented at thirty shillings per acre, must involve the farmer in a yearly loss, and cannot but astonish every one; more especially if it be recollected that this very land is susceptible of restoration to its former vigor and fertility at the moderate expence of 1l. 18s. 8d. per acre.

The farms in this district are from 50l. to 300l. per annum, and pasture in the ratio of five sixths throughout the district. The contiguity of the parishes to Bath, not exceeding a mean distance of nine miles, accessible by good roads, and which affords a market of almost unlimited consumption are circumstances peculiarly favourable to dairies.

Butter there for some years past has averaged the price of ninepence and ten-pence per pound. It is no wonder therefore that dairies engross a great share of the grass lands.

Marle grass is the spontaneous production of the marle land. It was first noticed and collected fifty or sixty years ago by a Mr. James, who lived on a large farm belonging to the Marquis of Bath, in the parish of Chilcompton. By his assiduity in preserving and propagating the seed, in the course of a few years it became common, and has been considered ever since as a valuable substitute for red or broad clover, to which it bears rather a striking analogy,

analogy, with however this difference, that it will
longer in the land.

When the marl lands are laid down to grasses, tre
Dutch clover, is sown in the proportion of 7lb. to 2
grass or broad clover, which enriches, diversifies, and
vegetation and blossoming, produces a carpet the m
and picturesque that can well be imagined.

Marle has been repeatedly tried on the looser red ear
on the freestone grit soil, in different parts of the di
out producing any good effect. It has also been carrie
out of the district, and applied to the light red earth
stone lands, with no better success. Though it may b
the marl lands, that the luxuriance of the pasturag
vegetation in the spring, with little or no suspensi
severe frosts) during winter, and their vicinity to B
concur to render dairies a very eligible, as it is a gen
occupation, yet notwithstanding on the larger farms,
proportion were devoted to tillage, since they produc
barley of excellent quality, and require, under a judi
of crops, no manure, but the first marling, for tw
thirty years, both landlord and tenant would derive
advantage therefrom.

The landlord might levy an additional rent of ten
acre on the lands so converted to arable, under a leas
one years; compelling the tenant to dress with marl fo
vious to the expiration of the term, by which means
be left, in the highest possible state of proof.

The tenant would be amply repaid his advance of re
by the general certainty and superabundance of his cr
the application of the Barton, and stall manure, arisi
to his *red earth lands*; which he may well do without i
former, and thereby find an equivalent in *their* impro
the advanced rent.

Rational and well-founded as this change of mana
appear to every intelligent and unprejudiced man, it h
less many formidable obstacles to encounter. Th
groundless apprehensions of injury to his lands, under
regulated course of tillage, his prepossession in favo

and grazing, which can neither impoverish nor exhaust the soil, the rich and beautiful complexion of the surface so gratifying to the eye during the greatest part of the year, his reluctance to build or enlarge barns, stalls, &c. The frequency of moduses for cow white, the easy rate of agistment, and the other vicarial tythes, with his rooted aversion to the payment of corn tythes in kind or by exorbitant composition, the smallness of many of the farms, and lastly his dread of innovation on the accustomed practice of his neighbourhood, all concur to diminish the quantity of arable land. It must be admitted that farms under 100l. per annum might not bear the expence of suitable buildings, to accommodate the plan here suggested; but since this, on every scale, would be proportioned to the size of the farm, the advance of the rent, exclusive of interest in money expended thereon, would secure to the landlord an augmentation of income deserving his notice. With respect to tythes the tenant would readily submit to the encreased amount, and would find more than adequate compensation in the abundance of his crops, and the moderate expences of tillage. Yet so revolting is this tax in the full extent and rigor of its application, as to induce the land owner and tenant to forego a positive advantage rather than comply with its exactions.

In the parish of Kilmersdon there is a species of soil usually called a freestone grit, of a light brown color, stiff, clayey, and abounding in stone. Underneath at various depths is to be found a blue marle, which, on repeated trials, has not hitherto been known to communicate any improvement. This marle is not readily soluble when exposed to the air; but retains its clay-like quality, which renders it unfit either to pervade, or incorporate with the soil. These lands are sometimes devoted to tillage; but are soon exhausted, and left to poverty and rest for seven or eight years; when a similar course of management is resumed. Present value from five to six shillings per acre.

COURSE OF CROPS.

1st Year—Lay broke up in the spring.
Summer fallow.
2d Year—Wheat sown early in October.
Produce 12 bushels per acre.

3d Year—Oats.

Produce 16 or 20 bushels per acre.

No Clover—The soil will not support it. If sown, it declines through want of sustenance.

Here ends the cropping without Barton manure. Mr. of Kilmersdon parish, fourteen or fifteen years ago tried this soil. The produce from mowing four or five years su averaged twenty cwt. per acre. It so far exists now i these lands, as to keep up their value to twelve or fourtee per acre. Where totally extinct, on breaking up afresh found in better proof than in its pristine state. Notwi this experiment, accompanied with effects so obviously yet the example has been but very little, if at all, follo neighbourhood, although surrounded by a thousand similar quality. However, a gentleman of large fortune prietor of the greatest part of this barren district in the sa has, for two or three years past, attempted its meliorati mer fallowing and turnips, to some parts of which he ploughings and harrowings. Its texture is already co loosened. Barns, ſtalling, and bartons are provided scale, in a situation to command the whole. Within a distance he can procure a supply of sand: a resource too be overlooked. With a relish for agricultural impr practical attention to its progress, and the convenienc mentioned, there is little doubt, but that in the course will be enabled, in no trifling degree, by a judicious cropping, to fertiliſe this very intractable soil.

This district abounds with coal, and with respect to is reducible to the separate divisions of northern and sou

The former, including the parishes of High Littlet bory, Paulton, (with Clutton adjoining to the west, and to the east of the district) Radstock, and the northe Midsomer Norton.

The latter, the southern part of Midsomer Norton, the Foss, (Holcombe and Ashwick adjoining the distric mersdon.

In the northern, the strata of coal form an inclinat plane of about nine inches in the yard. These are in nu

teen. In thickness variable, from ten inches to upwards of three feet. If less than fifteen inches they are seldom worked. Coal is now working generally from seventy to eighty fathom in depth. In a few places deeper; and by a late introduction of machinery to raise it by the steam engine, a much greater depth of working will be obtained. Profits of working in the aggregate, by no means equal to the extent and risque of the adventure; to a few works considerable; to the majority very moderate.

The coal is of prime quality; pure and durable in burning; firm, large, and of a strong grain; which ensures its conveyance to almost any distance, without injury to its appearance, or quality; which cannot be exceeded in any part of the kingdom. Bath is the principal market of consumption, to which may be added the western parts of Wiltshire, and the next adjacent parts of Somersetshire. The quantity now raised is from fifteen hundred to two thousand ton weekly. A much greater can be supplied should an increased demand require it. Boys and men to the number of fifteen hundred are employed in working it, with wages sufficiently adequate to procure them a comfortable subsistence.

An application is intended to be made to parliament at the ensuing session, for leave to cut two branches of a canal for the accommodation of the collieries in this northern district, to communicate with the rivers Avon and Kennet. Should the bill pass, a considerable extension of sale may be reasonably inferred. The permanence of the works is amply secured by various contrivances, in preventing the admission of the springs into the deep working.

The number of works, twenty-six. The owners of the freehold, from whence the coal is raised, generally receive an eighth of the gross receipt of sale; but, to encourage the proprietors to greater depths of working, have occasionally complied with a proportionable reduction of this quota, on account of the increase of expences in working; whereby they have derived a profit from coal which otherwise would have been irrecoverably lost. Some through ignorance and stubbornness have withheld this concession, and thereby incurred the loss.

Average price of coal five-pence per bushel at the pits.

The southern district is on a more limited scale of working. The strata of coal form an inclination of the plane from eighteen

to thirty inches in the yard; in some the plane is annih
they descend in a perpendicular direction. There are
twenty-five; in thickness from six inches to seven fe
worked under eighteen inches; in depth from thirty t
thom at the present working. By the steam engine wh
erecting in this district, a much greater depth will b
Profits in the aggregate of working very trifling, if an
the consumption of timber, and the expence of dra
The coal of various quality; some nearly equal to
northern district; but the greatest part less firm, of sh
and less calculated for distant carriage; but free to bu
divested of sulphureous stench, and durable. The small
lent for the forge, and when reduced to a cinder, calle
process of very ancient usage, it furnishes a fuel for d
which from its purity and total exemption from smok
excelled, if equalled. The south western parts of W
northern of Dorset, and the east and southern parts o
are the markets for consumption. The quantity now ra
eight hundred to a thousand ton weekly, which, in the
few years, might be extended to two thousand ton, i
be found. Boys and men employed at present amount
six hundred. An improved method of working has
adopted in some parts of this district, by which the
prevented from inundating the deep working; whereb
and duration will be considerably promoted.

A canal to the works in this district, which might
easy expence, has been for some time in contemplation;
not only would benefit the proprietors of the works, b
the consumption; but also reduce the price to the n
consumers more than half.

The average price of coal in this district is 3½d. per

Should the works in the northern district be stopped
ble increase of the poor rates would be 2000l. per annu

In the southern (much more burthened with poor)
eight shillings in the pound.

It may be said that this district cannot boast of any
agriculture which are peculiar to itself; the cultivatio
and woad excepted.

Its advances in receiving the improvement of more enlightened agriculturists are very slow, notwithstanding it has the advantage of a very respectable agricultural society, which has been established at Bath for the western counties upwards of sixteen years. From the tardiness before-mentioned it seems difficult to devise any new means to engage a stronger desire of improvement. More frequent marling naturally presents itself as the first object of notice, and it is especially desirable that the practice might become strongly urged if any means could be happily found to do it effectually.

The next SYSTEM OF IMPROVEMENT *to which I*
attention, is the LIMING SYSTEM, *and in this*
am naturally led to a

SURVEY OF MENDIP HILLS.

THIS chain of mountainous land extended, acco
ancient boundary, from Cottles Oak, near the town o
a place called the Black Rock, in the Bristol channe
being a distance of more than thirty miles. A gre
this land having been inclosed, divided and culti
course of the last forty years, and nearly an equa
remaining in its open uncultivated state, I cannot
views of the respectable Board, under whose auspic
will be brought forward to the public in a better w
minute description of the origin, progress, and suc
undertakings.

And first let us begin with taking a view of the *ob*
have been started to this species of improvement, a
cannot prove them to be for the most part either false

1st.—Invasion of the rights and interest of the cott

2d.—A supposed injury done to the breeding syste

3d.—The expences attending the act of parliame
of commissioners, and other subordinate age
in its execution.

4th.—The expence of buildings, such as farm-ho
stables, stalls and pools, for the purpose of
tinct farms, superadded to the expences o
and fencing, altogether constituting an expen
the improved value will not reimburse.

5th.—Injury done to the woollen manufacture by
number of sheep, and deteriorating the qu
wool.

6th.—A supposed diminution of the rent of the o
which such commons are appurtenant.

The foremost of these objections carries with it th
of a humane attention to the comfort of the poor, bu
vestigation will refute it.

There are but two modes of inclosing commons.
unanimous consent of the parties claiming rights, w

power to commissioners, chosen by themselves, to ascertain their validity, and divide accordingly, under covenants and agreements, properly drawn and executed for the purpose. Or secondly, by act of parliament obtained by the petition of a certain proportion of the commoners, both in number and value, whereby a minority sanctioned only by ignorance, prejudice or selfishness is precluded from defeating the ends of private advantage and public utility.

In point of œconomy, the first of these methods is the most eligible, as it saves the expence of an act of parliament, with equal security to the proprietors. But it is seldom practiced, unless in commons, on a small scale, from the difficulty of procuring the consent of *every individual claimant* without which it cannot be accomplished.

In either of these methods it is manifest that the right of the cottager cannot be invaded, since, with respect to legal, or equitable construction, he stands precisely on the same ground, with his more opulent neighbours; and as to his interest, I can truly declare that in all cases which have fallen within my observation, inclosures have meliorated his condition, by exciting a spirit of activity and industry, whereby habits of sloth, have been by degrees overcome, and supineness and inactivity have been exchanged for vigor and exertion. No stronger proof can be given of this than the general reduction of the poor's rate, in all those parishes, wherein such inclosing has taken place.

Upland commons are principally depastured in the summer with sheep, and if a cottager were able to stock ever so largely, the *winter keeping*, and his total inability to furnish them with food between the fifth of April, and the twelfth of May (before which time these commons ought not to be stocked) would be such a drawback, as effectually to exclude every idea of profit.

On the *moors*, cottagers within a moderate distance from the common generally turned out, a cow or two, perhaps a few geese, and I believe the latter are the only profitable stock. Not one in ten rented land to raise winter subsistence. In summer, the moor commons were frequently inundated. The cattle must be removed, and temporary pasturage hired on extravagant terms. On the other hand, should the season be favourable, the redundancy of stock from an unlimited right of feeding, by reducing the produce of

the cottager's cow so much below what it ought to b
him of every real advantage.

Proprietors or occupiers of large estates in the vicinity
mon, by turning out great quantities of stock by *day*,
them home to feed by *night* have derived the only benef
overfed common could afford.

The cattle of the cottager, as well as of the distant com
der this competition, must unavoidably suffer. The la
recruited by occasional removal to better pasturage;
having none, must hire, or leave them on the commo
a stunted or starved condition. These are facts of ge
rity, on which it will not be easy to deduce (*communibus*
material benefit to the cottager from stocking; but wh
pence of winter support is added, the question is decide
presumed *advantage*, is converted into a positive *loss*.
twelve shillings per annum a common might be rented.
gives with greater accuracy the value of a thing, th
unrestrained competition, if so, when the privilege
a common for a year, might be obtained for ten or twel
by a farmer in possession of means to accommodate
every variety of season, what can the value be to a
prived of these? instead of ten or twelve shillings,
real value of commons *inclosed* has been raised from 3l.
annum, which as an unquestionable fact establishes with
or hesitation, the *private* as well as *public* importanc
closing system. Most of the stocking cottagers hav
pendant to their cottages, without land, under the de
of *auster tenements*. To these, allotments are made equ
tity, and quality, as to farms of the greatest extent.
cottage claimant, by relinquishing a privilege, injurious
lucrative is placed in a better situation than the prop
extensive farm, who surrenders every advantage of stoc
capital, situation, and convenience might give him, for
of allotment with the former, who has no sacrifice t
ignorance and prejudice, and derives from his allotm
andiminished profit.

Besides, moral effects of an injurious tendency, ac
cottager from a reliance on the imaginary benefits of

common. The possession of a cow or two with a hog, and a few geese, naturally exalts the peasant in his own conception, above his brethren in the same rank of society. It inspires some degree of confidence in a property, inadequate to his support. In sauntering after his cattle he acquires a habit of indolence. Quarter, half, and occasionally whole days are imperceptibly lost. Day labour becomes disgusting, the aversion increases by indulgence, and at length the sale of a half-fed calf, or hog, furnishes the means of adding intemperance to idleness. The sale of the cow frequently succeeds, and its wretched and disappointed possessor unwilling to resume the daily and regular course of labour from whence he drew his former subsistance, by various modes of artifice and imposition exacts from the poor's rate, that relief to which he is in no degree intitled.

This description is by no means exaggerated. The parish of Wedmore, abounding with cottage commons, and one of the largest and most opulent in this county, will illustrate its truth and justice. Within twenty years there have been inclosed upwards of 3000 acres of rich moor land, heretofore when in commons rendered unproductive by inundations and their consequences, six or seven months in the year, and when pascible for the remaining months, of little value from being overstocked; which land is now set with liberal allowance of profit to the occupier from ten to fifty shillings per acre. These inclosure are made by ditches, which by annual cleansing and spreading the contents over the surface afford an excellent manure, with a new and extensive source of labour of the most productive kind, whereby the poor's rate have been gradually reduced one third of their former amount, before any inclosure had taken place.

The second objection to inclosing is the supposed injury done to the breeding system.

Few observations will suffice on this head. Commons are in general overstocked. Young cattle abridged of their food become stunted in their growth, and injured in shape and form. To restore them in these respects by better keeping is sometimes impracticable—always expensive. It is more than problematical with many intelligent farmers in the neighbourhood, whether from the circumstances, before mentioned, the breeding system on an average of

seasons and years has yielded any profit. But this is unden
certain, that the same land when inclosed and improved, will
tain at least three times the stock *breeding*, or *any other*, than i
in a state of nature. Suppose every acre of waste land in G
Britain by inclosure was improved threefold, what would b
consequence? a declension of the breeding system? The very
trary, an extension of it very probably in the same propo
Without breeding can you graze or make cheese and butter?
not these different modes of occupation most intimately conn
with and dependent on each other? Is not the same land co
tible to all and every of these purposes subject to the control an
gulation of the market for each? Can young stock be kept too
Should the breeding of cattle exceed the demand, and from
duction of price no longer pay the rent of land, will the f
repine because his land is susceptible of other methods of applic
no less beneficial? Surely not. Could he hesitate what to do
its high state of culture would direct him either to dairy, o
zing, as attendant circumstances might require. And shoul
market be glutted with the produce of dairy and grazing farms
farmer would naturally recur to breeding stock, or raising co
that all these articles would find their natural level, which th
mand for each, whether inadequate, moderate, or excessive, w
invariably regulate, But waste and uncultivated lands being
appropriated to the breeding of stock, and not convertible t
other purpose, is without remedy, whenever the market is
charged with its produce.

The same reasoning applies to hilly lands in their improved
by substituting corn instead of dairy or grazing. From the
going premises I think it may be inferred, that since comm
every description when inclosed and cultivated, are capable o
porting at least *three times* more stock than they did in a sta
nature, no serious apprehensions should prevail with respect t
diminution, or injury of the breeding system. I do not me
deny that some local disadvantages may occur, but these ar
trifling and limited to merit attention, and still less to imped
progress of an improvement of the greatest national importan
The preceding remarks more particularly apply to the moo
low lands. In addition thereto I have to observe, with hea

satisfa

satisfaction, its happy effects on the *health* and comfort of the inhabitants of the adjacent villages. Agues, and low fevers from the humidity of the air, impregnated with exhalations from the stagnant contents of the marshes, prevailed very generally during the vernal and autumnal seasons, and these for the most part were obstinate and more frequently subdued by the drought and heat of summer, and frost of winter, than by the most judicious medical treatment. Inclosing and draining have rendered these diseases as scarce in the *low*, as in the *uplands*, to the prevention whereof advance of wages (from four to six-pence per day) with constant employ arising from the same cause, have not a little contributed, by enabling the poor to *live better*, which is generally accompanied with a growing taste for cleanliness.

The third objection to inclosing, is to the expence attending the act of parliament, with those of commissioners and other subordinate agents employed in its execution.

I do not mean to contend, that rigid œconomy, and expert management have been prominent features in this line of public business. I am ready to acknowledge, that in some instances it has been justly chargeable with profusion, mismanagement, and unnecessary delay. On this subject, truth and justice oblige me to add, that in several instances within my own cognizance, the most enormous expence has been wantonly incurred in obtaining the act, nay double at least beyond the most liberal estimate of a fair and equitable charge.

In these cases the excess arose from the attendance of supernumaries in London, under the pretence of securing and expediting the bill, without rendering the least service in that, or any other way. Charges of this sort are not subject to the control or regulation of the commissioners, since they originate previous to their appointment, and should they refuse payment, a law suit of hazardous issue might ensue, which if unsuccessful, would expose them to reproach from the proprietors. The blame therefore must attach to the latter, for not exercising more vigilance, at the outset of the business. After passing the bill, *delay in the execution* so as to withhold the possession of allotments from the proprietors, for a year, or two, more than necessary has been imputable, and with some color of justice, to the negligence and inattention of the commis-

sioners. It must be acknowledged such conduct is truly
sible; since under many inclosures, especially of low
prime quality, the loss of even a year's occupation, if the
be of considerable extent, might be deemed nearly equiv
moiety of the expence. In this neighbourhood for some
this defect has been in great measure remedied; for unless
ceedings have been interrupted by issues at law, or the
has been of great extent, the commissioners have given th
tors possession of their allotments within a year from p
act. This dispatch requires a considerable share of judg
exertion on the part of the commissioners, as well as suf
sure and activity on the part of the surveyor. Anothe
management relates to the expence of meetings, which
was very improperly augmented by the attendance of so
principal commoners for purposes of festivity, without be
least use, rather retarding than forwarding the business.
tice was general, but for some years past has been for the
abolished, by a very judicious regulation of allowing the
sioners and their agents a certain sum per day as a con
for attendance and expences.

The public will be enabled to judge in what degree th
of inclosing ought to affect its determinations under t
course of management, by adducing the following speci
moor low land, and a Mendip, or upland inclosure.

Low Land.	£.
Act of Parliament	510
Roads	450
Subdivision, Rhynes, or Ditches, 8 feet wide at top, 4 feet at bottom, and 5 feet deep. Price of digging from 1s. 2d. to 2s. per rope (20 feet)	850
Gates, Bridges	140
Commissioners (3)	200
Clerk	60
Surveyor	140
Award and other Law expences . . .	110
Interest of Money borrowed	25
	2485

UPLAND INCLOSURE.

	£.	s.	d.
Act of Parliament	300	0	0
Roads	350	0	0
Fences, part wall, part quick sets . . .	850	0	0
Gates, &c.	56	0	0
Commissioners (3)	200	0	0
Clerk	80	0	0
Surveyor	80	0	0
Interest of Money	35	0	0
	1951	0	0

Under the first description the expence of obtaining the act amounted to upwards of 500l. which under proper management would not have exceeded 250l. Near two miles of road; stones quarried and broken at ten-pence per load (eight loads to a rope of 20 feet) hallage, at least one shilling per rope. Two bridges made, rhines made for draining the water and fences by ditching for the subdivision and allotment of upwards of 800 acres. Commissioners attendance, surveyors, solicitors and clerks bills, with every other incidental charge, all of which did not much exceed 3l. per acre. The average value of the land under a moderate computation, may be reckoned at 30l. per acre.

The latter is a Mendip inclosure; quantity of land nearly as the former; a mile of road more; fences partly quick set, partly young living stocks of hazel, black thorn, &c. and dry wall. Allotments not numerous but large, which materially curtailed the expence of fencing; road materials cheaply got. Parliamentary charges reasonable; commissioners and agents as in the moor inclosure, all of which did not exceed 2l. 10s. per acre. The average value of the land as ascertained by the portions sold to defray expences, may be reckoned at 20l. per acre.*

If facts like these be insufficient to appease the clamors of ignorance and selfishness against the inclosing system, or to enforce

* I never before knew an instance of Mendip land in its uncultivated state selling so high; the general price is from 8 to 12l. per acre.

conviction

conviction with the unprejudiced mind, the effects of
argument must be altogether fruitless.

That the present mode of conducting the business is
of further improvement, no one conversant with the
deny. Yet to accomplish this, many obstacles are to be
and perhaps one of the most formidable is that of its h
regarded, more or less, as a *little system of patronage.*
the soil, the rector, and a few of the principal commonc
lize and distribute the appointments. It is well know
of this sort have found their way through parliament v
intervention of a country solicitor, where no oppositi
ditated. In such cases, the parliamentary solicitor, and
have answered every purpose. Here a saving might be
sixty to a hundred pounds; but this would exclude th
one or more of the governing party. In some acts, *fi*
sioners have been appointed, in general there are *thr*
would be sufficient with power to nominate a third un
cumstance of difference of opinion, which seldom hap
country solicitor be employed he should act as clerk
missioners, and save the expence of a supernumerary i
city. Hereby another saving of at leaſt a hundred po
be made, without any injury to the concern. The of
veyor is by no means inconsiderable in the aggregate
This ought invariably to be disposed of under a fair
to the loweſt given sum for executing the whole of t
(after the act is obtained) by advertising for propos
effect. This alteration it is probable would save on
in some cases nearly half of a bill made out by charges i

In the choice of commissioners, it is of the utmost
to appoint *one* at least in the neighbourhood of the incl
liarized with all the varieties of the soil, with the influ
sons, and with its local peculiarities, whereby its preser
capacity for future improvement would be ascertained
sion, and the important office of qualifying the land ex
safety and confidence. The next in the scale of utilit
a person conversant with all the forms and routine of t
well instructed from experience in accounts, and in th
different modes of fencing, making roads, bridges, g

general and comprehensive knowledge of agriculture, both practical and speculative, and of genius to suggest such modern improvements as are best adapted to the situation and soil. Two persons thus qualified, are fully competent to execute the office with credit to themselves, and justice to the proprietors. But should the concern suffer by the absence of either through sickness, private business, or any other cause, a clause in the act might be inserted impowering them, or the proprietors, to choose a third for the purpose of avoiding delay. Commissioners whose residence is at a great distance, should only be resorted to, as an alternative from the impossibility of getting others properly qualified near home, on account of the extra charges of time and travelling expences.

The office of commissioner is without doubt the first in consequence and authority, under an inclosing act, but with respect to emolument the very lowest. Even the clerks bill of charges, *not* as a solicitor acting in that capacity, but as any other indifferent person did in times past exceed twice, and sometimes three times the amount of the fees of the former. The public have been not a little misled in their conceptions of this subject. The real fact is, that the whole of the responsibility attaches to the office of commissioner, which in pecuniary recompence is by far the most insignificant.

Thus have I impartially stated the defects of the present system with their correspondent remedies. In its most improved state it will retain somewhat of imperfection which perhaps cannot be entirely obviated.

I shall only add, that within a few years past in the neighbourhood of Wells, an inclosure was *farmed* by an attorney of extensive practice, and well known respectability, at a sum considerably less than it would have amounted to in the usual way. The commissioners were appointed by the proprietors; the business executed with singular dispatch, and all parties interested perfectly satisfied. Fences, roads, &c. were made by the proprietors.

When the inclosing system is appretiated by its obvious tendency to increase the produce of land, and the demand for labor, to augment the rate of wages to the husbandman, and to lessen the amount of the poor's rate, it is a subject of regret and astonishment, that so few means have been devised by the legislature, either

either to facilitate, or extend its progress. How m
done this way, a general inclosure act, unfettered by
expensive formalities, would speedily manifest. Fro
great number of private acts which have passed wi
twenty years, such general principles might be sele
basis, as to implicate almost every possible variety o
terest, and property. An act thus constituted, mi
hazard, or injury, be entrusted to a given number o
the quarter sessions, to dispense its powers and contro
tion, and such justices I should conceive perfectly c
determine on the propriety or impropriety of any pro
sure.

Thus a total extinction of parliamentary expence v
rage inclosing on the smallest scale, and with advantag
despised, would accommodate the most extensive.

This measure, however consonant to the principles
benefit, and national policy, would notwithstanding h
adversaries to encounter.

*Fourth objection.—The expence of cultivation and build
farm house, barn, stable, stalling, pools, &c. for the pu
ating a distinct farm,* &c. &c.

The low land, or moor inclosures being wholly app
grazing, dairy, or feeding young and poor stock, ar
the limits of this objection. It is therefore confined t
or Mendip inclosures.

The nature of Mendip soil, its first manure, the m
ping, the necessity of spending thereon the whole of it
hay, straw, &c. will be severally noticed hereafter,
quently will not be attended to in this place.

By a reference to these particulars, the necessity an
of buildings must be obvious, as not only contributin
its utmost latitude of improvement, but also when c
means of preservation therein. Without a barn, stal
nient barton, and pool, neither one nor the other ca
plished.

But it may be asked, are buildings to be provided
lotment? By no means. I do not think they are adm
the addition of a farm house, on a smaller scale of la

acres. The expence to accommodate this quantity with a farm-house, barn, stable, stalling, barton, pool, and pig stye, should not exceed three hundred pounds.

The next subject of enquiry, is the additional value communicated to the land by buildings. Should this be answerable to the expence incurred, the whole of the objection must fall to the ground, notwithstanding its apparent plausibility.

Let us suppose an hundred acres of Mendip land inclosed, and divided into four pieces of prime quality, but destitute of buildings; grant a lease of it to a farmer of property and judgment for twenty-one years, (a shorter term would be injurious to the landlord) and I may venture to say, that more than fifteen shillings per acre could not be got for it, accompanied with the usual covenants, and restrictions to guard against wilful impoverishment. With equal confidence, I may assert, the same land *with suitable buildings* would let to the same farmer, for a like term, at one pound per acre, with a subdivision of the four pieces into six. The increase of rent in the latter case will be twenty-five pounds per annum. Allow an interest of $7\frac{1}{2}$ per cent on the capital of 300l. expended on the buildings, which amounts to 22l. 10s. and there will remain 2l. 10s. as interest on the money laid out to make fences under a subdivision, and if quick set, to rear them when made, which certainly could not exceed 30l. Under this plan you do justice to the native qualities of the soil, by giving it a separate, and independent existence as a farm, and with a lease of proper covenants, you need not fear its being exhausted.

A speculative farmer will be apt to exclaim, is it possible that the want of buildings can create a difference of five shillings per acre to the occupier? Most assuredly it is; as will be evident by even a very general statement of the comparative effects of a twenty one year's occupation, *with* and *without* buildings. To begin with the latter; here lime must be chiefly, if not altogether depended on, as a manure. This, even with successive cropping with corn, will maintain its ground tolerably well during the first seven years. Its second application is attended with considerable diminution of its efficacy. From this period, the degeneracy of the soil, is no less rapid, than astonishing: it becomes light; coltsfoot and couch grass abound; clover and ray grasses fail. Intervals of rest of three,

or even four years, seldom recruit its vigor sufficiently
even a moderate crop of oats, which, if followed by a
the same grain, would scarce return the seed. Feed
two last years of rest, not worth more than nine shilling
No turnips for want of dung; no fold because the land i
impoverished to maintain it; straw carried off, and
only partially consumed on the premises by reason of t
situation. In this unproductive state, the land must rem
the last nine years of the term, reduced to the value of e
shillings per acre, and without the least prospect of melic

Painful and disgusting as this representation must be t
dicious farmer, it is nevertheless strictly conformable to
many instances might be adduced, to establish its veraci
point. Such has been, and most probably ever will be,
tion of Mendip inclosures, *without buildings*, and mo
course of crops. *With* buildings, we have to contemplate
rectly opposite, under a similar term of twenty-one yea
in the proportion of twenty quarters per acre will sustai
with little abatement of its fertility, for the first six or s
During this period, Barton manure will be plentifull
and may be devoted to turnips, cabbage, and potatoes,
derable scale, as it will not be wanted either for corn o
several succeeding years; it may be appropriated to
clover, assisted by the fold, which a feed of clover an
of the second year will sufficiently maintain. Shoul
sources be thought inadequate to support the whole o
from the ninth or tenth year, piece after piece in successi
broken up, and limed afresh, with an effect, very litt
inferior to that of its first application; as dung and th
found excellent preparatives for the repetition of this m
the alternate use of lime, dung, and the fold, togethe
following rotation of crops.

1st Year . Oats on the Lay
2d . . . . Winter and Spring Vetches folded off, and turnips
3d . . . . Oats and Artificial Grass Seeds,
4th Year . Artif Seed
5th . . . . Ditto
6th . . . . Dit

which the improved husbandry of the last twenty years has suggested, and which is gradually extending to the mutual interest, and satisfaction of landlord and tenant, it must be evident, that the land under a term of 14 or 21 years, cannot sustain the least injury. By the preceding observations, I trust the propriety and advantage of buildings, erected on a scale of Mendip inclosure of 100 acres, and upwards, are fully established to the conviction of every unbiassed mind. Under this statement, what plan of management should be adopted for smaller inclosures? Separate occupation, at a distance from the barton and farm yard, by the expence of carting, so as to preclude the return of produce in dung, must necessarily impoverish. Must inclosures of this description then be abandoned to the fate of a wretched and ruinous husbandry? By no means. A remedy as a palliative, if not wholly effectual, may be found. In the greater part of Mendip inclosures, either by allotment, or purchase, or both, a sufficient portion of land has been vested in an individual, to induce the necessity of building, with local residence and occupation of the farmer. The smaller inclosures should be let to the tenant or tenants of these farms, for the same term, and subject to the same covenants and restrictions, under which such farms are respectively held, with however a proportionate abatement of rent, by way of an equivalent for the want of buildings. If the lands with the latter, be rented at one pound per acre, the former should at fifteen shillings, or at most at sixteen shillings; and if either price be obtained, smaller inclosures would be provided for, on a footing without buildings, equally, if not more advantageous than larger, with them. Perhaps it may be objected to this plan, that by such additions, Mendip farms would become too extensive, and unwieldy for general occupation. Under an improved system of management, it is now well known, that the most profitable destination of these farms, must be with little variation, to *corn* and *sheep*; and for these purposes, it is no less obvious, that farms cannot be well too *large*, provided tenants can be found of sufficient ability and capital to occupy. This at first may create some difficulty and inconvenience, in letting to farmers in a neighbourhood where the largest farms seldom exceed 200l. per annum. This however can only be temporary; since the quality of the soil, and the situation are favourable to corn, and sheep, and begin to attract the

notice of farmers, who have been accustomed in other
occupy farms of this description on a very large scale.
a system of management adapted to the foregoing purpose
on experience, and prosecuted with vigor, will soon con
of the neighbourhood, that *Mendip farms*, thus appropri
most any extent, may be occupied with as much safety
tage as can be reasonably expected or desired.

Having stated 300l. as the sum requisite for buildings
modate 100 acres of land, I would observe, that 400l.
commodate 200 acres, 500l. 400 acres, and 600l. 50
that this expence decreases by an inverse ratio as the fa
mented: and in like manner that of fencing, as a larg
quires less subdivision than a small one. Both these cir
further tend to justify the predilection for *large* farms.

I shall conclude this head, by adducing an instan
emplify the necessity and importance of raising Men
sures to separate and distinct farms.

About 20 years since near 600 acres of Mendip lan
closed, the property of a gentleman of large landed est
neighbourhood. For situation and quality, it could n
passed by any land of this sort. The contiguity to ma
good roads was another privilege; the quantity was equ
spectable farm, and 700l. was judged sufficient to provi
cessary buildings, in the opinion of those who recomm
measure. A gentleman farmer from Norfolk, of consid
perty, was so much struck with the soil, situation, and
cumstances, as to declare, that as a farm he would give
for a term of 21 years; this was refused, nor have any
been erected since. The land was let to the proprietors
the adjacent farms in different proportions, at not more
per acre for the first 9 or 10 years, but since, for not mor
Great expectations were formed on the improvement
farms, by the produce of the new inclosure being entirely
thereon. These however are not realized, for the stra
the most part sold to the adjacent towns, and during
years of tillage, it was no unusual practice to crop w
und 4 years *successively*; yet such was the fertility of s
aptitude for this species of grain, that the produce in

seasons with a single plowing, has been occasionally 6 qrs. per acre. The consequences of this wretched husbandry, with regard to the soil, are too apparent to particularize, and too absurd and ruinous to need any further comment. I shall only subjoin, had a distinct farm been made in this case, 7 per cent. would have been paid for the buildings, exclusively of *an increase of rent of upwards of* 100*l. per annum*, and the land under a proper lease, instead of its present reduced rent of 10s. or 12s. per acre, would have attained a permanent value of a guinea per acre.

The 5th objection involves two distinct relations:

1st. Deterioration of the quality of wool.

2d. Dimunition of its produce by lessening the number of sheep.

With respect to the first, by way of preliminary, it may be necessary to enquire, to what degree has this deterioration of quality manifested itself by a reduction of price on wool from sheep of the *same species*, fed on improved and *cultivated lands*, or on *common* and *waste lands*? Was this point, so essential to the present discussion, ever ascertained by fair and accurate experiment? If not, the objection is wholly hypothetical. If it have, the result ought not only to be known, but established as data to argue from. Nothing of this kind however, has fallen within my observation; I must therefore proceed assumptively, and grant, for the sake of investigation, a deterioration of quality as far as six-pence in the pound by depasturing sheep, which afford the finest English wool on *cultivated* land, instead of waste or *barren*. If the concession as to price be sufficiently liberal, let us enquire how far the public, or individuals, are obnoxious to injury therefrom. The clothier may mix somewhat less of this sort of wool with Spanish, the better to disguise the alteration in quality; or if used by itself, some very trifling difference in the texture or feel of the cloth might be the consequence. But if the alteration be *universal*, in neither point of view, could any particular clothier, nor the trade collectively, be affected by it; and it is at least probable, the public at large would not be endued with sufficient knowledge of the manufacture to detect it, or if they did, would regard it as too frivolous to merit notice. Allow for a moment, the finest English wool to be worth 2s. per pound, from sheep fed on commons or waste land, and 1s. 6d. if fed on cultivated land. In the former case the manufacturer

nufacturer of cloth would be a gainer, by having 4lb. the same money as 3lb. and he could not complain tional reduction of price; a benefit might therefore, bu injury could accrue, to this party in the business. Le vert to the farmer, who not only represents himself, b at large as being deeply interested in the increased pro not only in *this*, but in every possible variety of its Enquire of the farmer, and he will tell you, that on an tivated land, by the aid of turnips and grasses, he ca sheep instead of one on waste, or land in common, with an undoubted augmentation both of fleece and has therefore four fleeces and four carcases instead of manifest improvement in the value of each. Must h a mere phantom of a grievance which bewilders the in the manufacturer, relinquish advantages of decided able importance both to himself and the public? Surel

The foregoing remarks apply principally to the sn sheep producing the finest English wool; but this sort on the decline in favor of the improved breeds of Dorse down, and other larger sorts, as being more produc (quality and quantity considered) in size of carcase, ring a less given time to graze. Let it be admitted fr siderations, that in course of time the former breed sh extinct. What then? Should a real degeneracy of t wool, magnified by the fears of the manufacture, be militate against the solid benefit enumerated as above? of cloth as to fineness is *comparative*. Distinction pride and vanity would cease to murmur, if the wool the manufacture of cloth were of the *same* quality, ho The more *opulent* classes of society might still be gratifi made entirely of Spanish wool; the *middle* with a mix nish and English, and the *lower* with that wholly man English wool. But all this being uniform in its effect, and being evidently calculated to advance nat rity, as well as individual advantage, could create no mortification or disgust. Let us contemplate the subj still more interesting claims of humanity. Can the and the artificer, the labouring manufacturer, and the

be fed with the fleece? Suppose this valuable species of animal food were confined to the small breed, would there not be a diminution of its quantity so considerable, as might probably advance the price of mutton from 4d. to 6d. per lb.? Let it be remembered too, that in proportion to the increased value of the fleece the farmer will be enabled to reduce the price of the carcase; for his profit is derived from the *whole animal*, not as separated into parts. Therefore the more valuable the fleece the cheaper he can afford to sell the carcase.

The next article under this objection is the diminution of the produce of wool by lessening the number of sheep.

This takes for granted what still remains to be proved, namely, that the inclosing of commons, fed principally by sheep, has a tendency to lessen the breed. I shall consider this objection as applicable to sheep in *general*, and not to any particular description or species. Here I have not only my doubts as to the truth of the position, but I am inclined to think, that the number of sheep will be *increased* thereby, and this too, in a very considerable degree. For perhaps four years after inclosing, an exception may be pleaded, since this portion of time must be allotted to a course of tillage *necessarily* previous to the cultivation of sheep feed. This circumstance as being altogether temporary, should not in the least operate as a deduction from the validity of the opinion. From this period, when turnips and artificial grasses are brought forward, I would date my calculation.

Recurring to a former observation, that Mendip or upland inclosures were most profitably applied as corn and sheep farms, I will suppose one of this sort to consist of 400 acres. In its cultivated state 100 *acres* may be allowed to sustain as many sheep as the *whole* did when in common, and a less proportion of land than this will scarcely be allowed for sheep feed. If this be admitted let me ask, what becomes of the futile apprehension of *lessening the number of sheep*. Let the manufacturer no longer repine, nor the *timid* senator be the victim of groundless distrust: the farmer will have the same quantity of wool provided from a fourth portion of land as was before devoted to the purpose, and the latter will have the consolation to reflect that the other three fourths are raised from

from a state totally unproductive to a capacity of
owner with corn, and pasturage for cattle.

I have some reason to believe that unfavourable imp
been made on the minds of both houses of parliam
general inclosing system, and these may have aris
magical influence of an expression long sanctified by the
namely that of the woollen manufacture being the
the nation, to which even the land, in all its diversit
must ever be subordinate under every kind of parliam
lation. A little consideration will serve to detect t
this opinion.

But to recur. In this farm of 400 acres, suppose
appropriated to sheep. On the same ground of reasoni
increase the number by the addition of a moiety.
proportion of sheep food, is much nearer to the standar
than the former; if so, in any ratio, the manufactu
being abridged of his supply of wool, by inclosing, w
siderably more, and probably too at a reduced price.

Such are the facts relative to wool, the conclusio
and obvious. The suspicious and clamorous manufact
by a spirit of monopoly which the legislature has
much disposed to countenance, may rest satisfied that h
no *injury*, but may great *benefit* from the inclosing syst

For arguments sake give me leave to reverse eve
has been urged relative to the present subject, and all
to the most ample conviction, that the clothier woul
to some loss by a general adoption of the inclosing sy
induces a comparison between the clothier and farme
respective formation of *collective* bodies in the great ma
society. Let us appreciate by the rule of impartial d
the value of each thus united in number, *in the amou*
employed, in the quantum of labour furnished, and in
means for levying the national revenue.

First in number. Here accuracy cannot be expec
necessary, it will be sufficient to observe that the cl
facture in coarse and fine articles is principally, if not
fined to the countries of *York*, *Glocester*, *Wilts*,
Devon. By residing near a considerable clothing town,

I derive my data of calculation on this and the subsequent divisions of the subject, and so far as conjecture may assist I should state the number in all those places not to exceed 2000.

In Yorkshire I am obliged to conſider the merchant as the clothier, although in fact the weaver or piece maker is, who ſells his goods by the piece, to the former at a common hall. The latter are ſo numerous, as to defy computation, at least with repect to myſelf, living at a diſtance of 250 miles, but this will make no difference in the concluſions to be drawn, ſince the capital veſts in the merchant, on whom devolves the office of finiſhing the goods from the rough ſtate in which they are purchaſed from the piece maker.

With reſpect to the number of ſheep and corn farmers in Great Britain, it will be impoſſible to ſtate with any kind of certainty without much trouble and expence. There ſeems to be no better general clue to the diſcovery than tracing the landed rental (houſes excluded) of the whole kingdom through its various modes of occupation, and then allot the proportionate ſums to make up the amount.

Let this rental of England be eſtimated at 18,000,000l. per annum, beſtow 6,000,000l. of this ſum on grazing, dairy and breeding cattle farms, the remaining 8,000,000l. on farms for the production of corn, out of which deduct 12,000,000l. for ſuch as raiſe this commodity without the aid of ſheep, and there will remain as appropriated to the corn and ſheep farms 9,000,000l. per annum. In England ſheep and corn farms are for the moſt part *large*; let us ſtrike the average rent of each at 200l. per annum, which to make up the rental of 9,000,000l. will furniſh 45,000 corn and ſheep farms, exceeding in the proportion of 20 to 1 the number of clothiers.

The next ſubject of examination is the *capital employed*. I will allow the clothier who makes all ſuperfines 600l. to each ſcribler; a mixed trade from 12s. to ——— ſuperfines 450l. from 8s. to 12s. 300l. and from 4s. to 8s. 150l. theſe ſums averaged will give 375l. to each ſcribler. I muſt here diſclaim the moſt diſtant pretenſions to *accuracy*; but from the foregoing premiſſes, derived from ſome general knowledge of the manufacture, I have reaſon to believe that the capital employed in the clothing manufactory

does not exceed 14,000,000l. which divided among 20
turers allots to each 7,000l.

I shall state on a very moderate estimate that 600
quired to stock a corn and sheep farm of 200l. per annu
the calculation of 45,000 occupants will produce
27,000,000l. exceeding that employed in the clothing
in the proportion of nearly 2 to 1.

We now proceed to ascertain the quantum of labour
each, hoping that due allowance will be made for the
intrusion of error and imperfection, which calculatio
principles must be subject to. In Yorkshire, where
branch of the manufacture is executed by machinery
bour is in a great measure annihilated; or it is no furth
then to regulate the action and application of the form

The progress of machinery in the *west* is rapid;
there in a short time must become universal on a prin
defence; without it, the trade *must* migrate from that d
north. An estimate of the number of persons at pres
in the manufacture, including as a *basis* the almost c
blishment of machinery in the north, with its progre
in the west, I think cannot exceed 100 to each clothier
of 7,000l. comprehending men, women and children,
make the aggregate number 200,000.

It is a received maxim that a farmer should mak
one for his landlord, one for the wages of labour,
liquor to servants, and implements of husbandry; a
for profit on his capital. My attention will be lim
destined for the wages of labour, &c. and after de
for implements of husbandry, I shall consider the re
as wholly reserved for that express purpose. Allow
suspension during festivals and holidays in the cour
the weekly disbursement will stand at 3l. Men, wo
dren at an average of 6s. per week to the number of
up the weekly amount of 3l. 45,000l. sheep and co
therefore employ 450,000 persons.

We are now arrived at the fourth and last article
namely, the supply of means for levying the national

With the exception of dye-stuffs, oil, and foreign soap, all of which are subject only to custom duties, the clothing manufacture has never been contributory on this occasion.

As forming no inconsiderable part of what is usually denominated the staple trade of the nation, it has hitherto maintained its claim to an exemption from every mode of specific taxation. Not only so, but as a security against an indirect attack in this way, a draw-back of the excise of soap employed therein, is allowed: the policy of this indulgence I do not mean to controvert, since the quantity of soap used being known only to the manufacturer, he might have levied on the consumer in the price of his goods four times its value without risque, or being subject to any other restraint, than what competition might impose.

Thus it appears that the clothing manufacture furnishes but little aid towards levying the national revenue.

How very different with the corn and sheep farm. Sheep furnish duties on parchment, leather, and candles. Corn is a most prolific source of revenue. Barley in malt, beer and spirits, wheat in starch, all which are wonderfully productive, and in amount must be acknowledged to be the very pillars of the great and complicated system of taxation.

Let us now examine how the account stands.

Clothing Manufacture.	*Sheep and Corn.*
Individuals exercising it 2000	45,000
Capital employed . . . £. 14,000,000	27,000,000
Labour to individuals 200,000	450,000
Means of taxation *scarce any*	The *principal.*

It is evident from this statement, which is neither partial nor exaggerated, whether we regard the interest of individuals or that of the empire, under a comparative view, how much the preponderance is on the side of the sheep and corn farmer. I mean not to detract from the importance of the clothing manufacturer;

It is confessedly great, and extensive, *independently* considered. The legislature thinks differently, or else under an almost yearly multiplication of taxes, how comes it to pass, that it has hitherto escaped the vigilance of finance. The *poor* man under the pressure of a numerous family, with circumscribed means of support, is rendered

tributary in the articles of shoes, soap, and candles, w
not do without; the *rich* man in his coat of superfine
with an exemption.

The woollen manufacture comprehends besides t
many other valuable branches of trade, viz. No
stockings knit and wove, carpeting, camlets, ser
&c. &c. to all of which I would assign, on the f
conjecture only, three fourths of the capital, before all
clothing manufacture, and it will stand at 10,500,000

In the whole of the woollen manufacture, let the ca
mated at 25,000,000l. Its distribution in the foregoing t
much more extensive than in the clothing; but in wh
I am not able to to determine; perhaps it may be as th
To obviate cavilling or misconstruction, I again disc
tensions to accuracy, as having few means of informati
guide, or regulate my enquiry. I should not only ch
mit to, but easnestly solicit correction from those wh
session of means more ample, and documents less confi

I will therefore state the number of manufacturers at
pital to each 1000, making in the whole 10,000,000l.
persons employed by each manufacturer 30, the ag
300,000; no greater aid, derived from any of those
the woollen manufacture to the revenue, than from the

GENERAL STATEMENT.

Woollen Manufacture in all its Branches.	
Individuals exercising it	12,000
Capital employed	£. 25,000,000
Labor to individuals	500,000
Means of taxation *scarce any.*	

Sh	
£.	
T	

Permit me here to observe, that I do not mean to d
the importance of any of the foregoing branches of
manufacture, separately considered, or in combination
mit it on a very extended scale of interest, both private
but *comparatively* with sheep and corn, in both respec
riority is not so manifest, if the preceding calculations,
any tolerable degree, towards certainty.

Justice and impartiality compel me to remark, that the woollen manufacture, in almost all its branches, has been for some years past, and is *now rapidly* decreasing in its heretofore most fertile source of national benefit; namely, in furnishing labor adapted to the different periods and stages of life. Machinery *must* and *will* be universally introduced, otherwise the districts, where *it is not* used, must be sacrificed to those where *it is*. Would the legislature interfere to suspend its operations, or limit its progress? This would be incompatible with its wisdom and justice. To allow only its *partial establishment* would be oppressive; to admit of *none*, would be ruinous; because, such machinery, with its appendant branches of manufacture, and a *few individuals* allotted to each, is not only susceptible of, but it is presumed will *shortly* be, in a state of migration. In Yorkshire, where it has received a degree of perfection, and an extent of establishment beyond that of any other part of the kingdom, I have been informed from indisputable authority, that before the present war, the *great demand* for the produce of the manufactures, left but *few* in comparison to resort to agriculture for support. What the *present* situation, may be in this momentous relation to national prosperity, I am not able circumstantially to describe, but general rumor states it as a melancholy reverse.

The sixth objection supposes a diminution of the rental value of estates to which commons are appurtenant.

In *theory* this may appear in some degree specious, because an increased produce without an increased consumption, would more or less countenance such an inference.

But admitting the premises, it induces the necessity of investigating the relative operation of the cause presumed. Let us suppose a farm with common appurtenant to be worth 100l. per year, and that by a deprivation of the common, its value be reduced 5l. per year. If the common *inclosed* be worth 10l. per year, the objection must give way.

This statement however bestows a degree of importance on the objection, which it scarce deserves; for in fact, the inclosing both of the low and uplands, has been uniformly accompanied with an increased produce from *both*; and it is no less true, that scarce an instance

instance can be produced of the least abatement of rent
estates, in consequence of the tenants being deprived o
mons by inclosing.

The foregoing disquisition will, I fear, appear to r
readers too diffuse and prolix, but as the subject is o
importance, and as it has been the custom of many to d
provements of this kind, particularly when applied to
to those of Mendip hills, I trust it will not be thoug
impertinent.

I shall now proceed to a minute delineation of the g
tice of farmers occupying land in this forest; and e
shew how far the general end of improvement has b
view, how far it has been deviated from, and in what
general system is susceptible of amendment.

It appears by the foregoing statement, that the exp
act of parliament, commissioners fees, roads, dividing
ting, fencing, drawing, and inrolling the award, and
cidental expences, ought not to exceed 2l. 10s. per a
must be added twenty shillings per acre for raising t
hedges to maturity; and to avoid objections, I will s
lings per acre for necessary buildings, pools, &c.

Let us now endeavour to state the "*cui bono*" of
lation.

In its open, uncultivated state, the value of this was
be estimated at more than three shillings per acre; i
matter of doubt, all circumstances considered, if it b
thing to the possessors. In its inclosed state, and pr
cultivation, it might be let for eight shillings per acre
cultivated and manured with lime, its value will be
fifteen shillings.

Let us state the account both ways.

Dr.				Cr.		
To first value 3s. per acre, and 25 years purchase . .	3	15	0	By value at 8s. per acre, 25 years purchase . . .	10	0	0
To inclosing, dividing, without buildings	3	10	0				
Profit	2	15	0				
£.	10	0	0				

In this instance the profit is not despicable.

OR, SECONDLY,

Dr.				Cr.		
To above cost without buildings .	7	5	0	By value at 15s. per acre, 25 years purchase . . .	18	15	0
To buildings, &c. .	2	10	0				
To sundry plowings, harrowings, and liming, 20 qrs. per acre	4	5	0				
	14	0	0				
From which must be deducted the value of the first crop, exclusive of seed, interest of money, and all other charges	3	12	0				
	10	8	0				
Profit	8	7	0				
£.	18	15	0				

There are few ways in which money or industry can be employed to greater advantage than this, or in which the public good can be more promoted; and yet I have frequently heard men, in other

respects of sound understanding, ridicule such specula
gether visionary, and absurd.

Were it even admitted that the adventurers in t
are for the most part sufferers, yet it cannot be de
community is benefited, inasmuch as the land is ma
ten times as much as it did in its primitive state; a
of labor is nothing but an addition to the capital
nation.

Notwithstanding these improvements on the fore
are now treating, have been carried on with unaba
activity, yet it will appear by the following statement
left to be done.

Inclosed Parishes	*Acres*
Leigh	100
Ashwick	350
Cranmoor, &c.	300
Charterhouse	1000
Hayden	400
Ubly	950
Blagdon	1000
Doulting and Stoke	800
Shepton	800
Shuters Bottom	600
Westbury	350
West Hartry	900
Compton Martin	700
Blagdon	800
Old Down	100
Dinder and Croscomb	800
Chilcot and Horrington	800
Wells	2800
	13,550

Uninclosed Parishes
Chewton
East Hartry
Priddy and Stoke
Cheddar
Axbridge
Compton Bishop
Winscomb and Sh
Rowboro' and Ch
Berrington
Charter House
Banwell, Locksto
Curston, Lockin
and Hutton

The soil of these hills is for the most part deep, loamy, and of a good consistence; and were the climate more genial, could not fail of being highly productive *in all seasons*. Occasionally are to be found spots of land less valuable, being of a light, spungy nature, black in color, and totally unproductive of corn on *first cultivation*.

Nature however has wisely provided a manure within itself, for under the surface, at the depth of a foot, is generally found a strong clay, which being spread after the rate of thirty or forty cart load per acre, gives such a tenacity to the soil, as enables it to produce corn, or any crop in great abundance.

And here let me advise a general investigation of the substrata of all soils, about to be improved; for I verily believe, that in most instances, a manure may there be found, near at hand, and congenial thereunto. Do we not frequently find clay under sand, and sand under clay; under flint, *chalk*; under white lias, or stone brash, *marle*; under red earth, *lime stone*; under peat bogs, sea *mud* or *clay*. Are not these circumstances sufficient indication to the wary husbandman, to examine minutely the interior quality of his land, previous to applying extraneous, and expensive manures.

The climate of these hills is cold, moist, and boisterous during the winter season, and frequently immersed in fogs; but in summer, the air is clear, salubrious, and invigorating. And it frequently happens that potatoes, French beans, and other spring crops, are destroyed in the *vale*, by frost in April or May, when those on the *hill* are in no degree injured.

The favorite corn crop is *oats*, which are produced in great abundance, and of good quality. The wheat and barley are inferior, being thick in the skin, and of a dark color; however the defect in *quality* is amply made up by the *quantity*, for it is no unusual thing after the land is manured with lime, to get from twenty to thirty bushels (Winchester) of wheat, and forty or fifty bushels of barley per acre. As to oats, the usual crop is from forty to sixty bushels.

But the most eligible mode of conducting a farm on lands of this description, is to grow *comparatively*, but little corn, and *that little* in the highest perfection. To have a great breadth of turnips, cabbages, potatoes, vetches, artificial grasses, and consequently to

maintain a great stock. To provide all necessary buil shelter in the winter, and for the purposes of making mo dung, which the large produce of straw will enable the o do. If sheep be kept, let the choice be of wedders, o (a breeding flock on such exposed situations is hazardous them be folded every day in the year.

By these means, lands of this description may be carri progressive state of improvement; and if the present pri different articles of produce be not greatly reduced, n proprietor, nor the tenant, will have any reason to compl

Let us now proceed to a description of the fences, buil servoirs or pools, limekilns, roads, and all other the n pendages to such undertakings.

There are various modes of fencing, and each has its but the two principal are *walls* and *quick set* hedges.

WALL FENCE.

In most instances, the *outside bounds* are a wall fence six inches high, two feet and a half wide at bottom, a inches at the top, which is covered with a turf of six inc in the form of an arch, making together an heighth of This wall is partly dry, and partly cemented with mortar is commonly called a *list wall*. In some instances where of stone can be procured, it is made without cement, a built, such a wall is very durable. When the ground is foundation of the wall is laid on the turf, and this is to be as it will not be so apt to sink as when a trench is dug. pence of a list wall may be thus calculated per rope of t running length.

To quarring or digging 8 load of stone, (25 cwt. each) at 3d.
To halling the same supposing the distance $\frac{1}{2}$ a mile, at 6d.
To building per rope, (20 feet) . . . . at 3s. 6d.
To 3 bushels of lime . . . . . at 3d.
To covering with turf (if done very well) . . . .

DRY WALL.

	£.	s.	d.
To quarring as before	0	2	0
To halling ditto	0	4	0
To building . . . . . at 2s	0	2	0
To turfing	0	0	3
	0	8	3

When stones can be got within a wheeling distance, or about sixty or seventy yards, the cost will be reduced about two shillings per rope, and if the wall be *wholly* made with cement, it will be enhanced about 2s. 6d per rope.

QUICKSET HEDGES.

These hedges, if rightly managed and attended to, whilst young, are in themselves, great advantage and profit; they afford good shelter for the cattle, and they furnish fuel and writh for the necessary purposes of the occupier.

The first thing to be done, is to mark out the course of the ditch. The dimensions of the bank on which the quick sets are planted is generally seven feet at the bottom, three and a half feet at the top, and two feet high. On each side is a ditch 3 feet wide, and 2 feet deep; the sides being made sloping, and the bottom not wider than six inches; this is to prevent the cattle from walking in the ditch, and cropping the young shoots. In making the ditch, the men should be particularly careful, not to throw any bad earth from the bottom of the ditches into the centre of the bank. If this be done, the growth of the quick will be greatly retarded. The making this bank will cost nine pence per rope, (twenty feet).

Let the sets be taken from a nursery formed on a good soil; let them be straight in their growth, having been once transplanted from the seed bed, and four or five years old. The shoots should also be smooth on the bark, and well rooted. These sets are worth about one shilling per hundred.

The bank being thus prepared, and the quick ready, le
be cut in the middle of the bank, and let the sets be cut
laid with the head inclining a little at the distance of ab
inches from plant to plant. Let the roots be then cover
little of the best mould, after which fill up the whole tre
rotten dung, or compost, strewing a little more good mou
top. The digging of the trench and planting will cost t
per rope.

Nothing more is necessary but to secure them from inju
their defence therefore, and shelter, two dead hedges
made, about six inches distant from the outside edges of
These hedges are about three feet high, and com
wreath, or bush wood, with a proper number of sta
expence of materials and labor is about 2s. 10d.
Time of planting the quick either in the months of
February, or March. It is the practice of some to plant
of quick instead of *one*, but I have not found this plan s
well. Some also recommend the planting at greater dist
three inches, under an idea that *thick* planting retards thei
but I have invariably found that the hedges planted *thick*
best.

Some advise the planting of timber trees in the hedge, b
it a bad practice, as the dripping from them frequently
thorn plants, and makes a vacancy in the hedge.

After this the young quick must be carefully weeded,
twice a year, and particular care must be taken to pre
being cropped either by cattle or sheep, both of whom
fond of the tender buds; and if by any accident they ha
access to them, and gnawed them, they must be cut do
1½ inch of the ground. In cold, exposed situations,
dead fences are requisite, to bring the quick to maturity
cost may be thus calculated.

	£.	s.	d.
Making the bank	0	0	9
Quick sets 80 in a rope	0	0	9
Planting and dunging	0	0	2
2 Dead hedges	0	2	5
(*N. B.* One waggon-load of writh will cost 17s. 6d. and make about 15 rope of single hedge.)			
Making two dead fences	0	0	5
	0	4	6
Weeding plants for three years	0	0	3
2 Additional dead hedges	0	2	10
	0	7	7

N. B. The old wood will pay for sundry repairs of the hedges injured by sportsmen, &c.

Having now stated the different expence of a *mortar*, and *list wall*, a *dry wall*, and also of raising a bank, and planting *quick*. It may not be amiss to enumerate the comparative advantages and disadvantages.

A wall is certainly the best fence for a given number of years. It covers less ground, it does less injury to the crops than hedges. If part by accident fall, it is easily repaired, cattle are kept more secure, sportmen are excluded. These are the principal advantages, which in a great degree compensate for the want of shelter and durability, and in most instances where stone can easily be got, and I think in all cases, where land is poor and exposed to violent winds, it is no ineligible fence.

On the other hand, quickset hedges are beautiful to the eye, and if the climate, quality, and depth of soil, be such as to throw out a vigorous shoot, and minute attention be paid to them in their infancy, they are less expensive, and at the end of fourteen or fifteen years, will yield a sufficient produce when cut down, and plashed to pay all the expences incurred by the first making, and this cutting may be repeated afterwards every twelve or fourteen years without injury to the stocks: and here let me remind the farmer, that the proper time to cut and plash his hedges, is when the ground is to be ploughed, or if it be pasture, when the crop is to stand for hay; for cattle are very fond of the young branches, and by cropping them in the summer will greatly injure the shoots.

But may not these too modes be so combined, as
advantage of both, that is, by making both a wall
to this there can be no objection, but the expence.

A dry stone-wall, 4½ feet high, with six inches turf
may be built on a similar calculation with the forego
shillings per rope, and a low bank may be rose under i
quick may be planted. The growth encouraged by
warmth will be rapid, and in four or five years tim
may be taken away, and the stones converted into li
on the public roads, or for any other purpose. If t
made at the time when the land is converted into tillag
fence will be sufficient, and that need not be an expensi

The DISBURSMENT *will be as follows:*

Building 4½ feet of wall, stones and halling included	
Turfing	
Making bank and planting quick	
Sets	
1 Dead fence on the inside	
Weeding	

From which deduct the value of the stones at 3d. pe	
cart load	

This I think a more eligible mode of fencing than e
preceding, but still there is another method which I
others in situations, such as that on which we are now

This is making a bank four feet high, and plantin
grown sloe or *black thorn*, setting them very thick, and
the top to the height of three feet. The principal ob
can be started to this plant is the running of its roots
said to obstruct the plough, but I can declare from long
that in banks, such as I describe, accompanied with
feet deep, no such inconvenience has occurred. In mo
great quantities of this black thorn might be found i
borders of fields, commons, &c. and the owners wil

by your digging them up; one good waggon-load of these plants, will be sufficient for twelve rope, and the cost may be thus estimated.

	£.	s.	d.	
Making the bank	0	1	0	per rope.
Digging up and planting	0	1	0	ditto
Carriage of plants	0	0	6	
	0	2	6	

N. B. The price of carriage must vary according to the distance.

It may be adviceable to mix with the black thorn, some hazle, or withy stocks, together with the *large brier*, and to lay the loppings of the sloe along the summit of the bank, securing them by small stakes, so as to prevent sheep from making a passage through the stocks. This fence requires but little repair; the sloe will throw out so many shoots from its root, and the briar will so intwine its branches with the hedge, as to make it in a few years impervious to cattle of any kind. And though it cannot be expected to grow to a great height, yet it will be as close and thick as the farmer can wish, and together with the bank will constitute excellent shelter and defence, *and withal* will be made at the least possible expence.

After inclosing and dividing, the next object of attention are suitable buildings, such as a dwelling-house, barns, stables, stallings, &c. &c. These are placed as near as possible the centre of the farm, and though not elegant, are for the most part useful and commodious. They are built with stone, and generally thatched, the inconvenience of which is severely felt; for the moisture of the air, and the powerful effects of the wind, render frequent repairs necessary. A roof will require coating every eight or ten years, it is a harbour for vermin; is more dangerous in respect to fire, and every thing considered, is more expensive than tile, to encourage the use of which, our rulers would do well were they to repeal the present tax upon that article (or at least to allow a draw-back on such as may be used on farm-houses, barns, &c.) for I think it would not be difficult to prove, that the injury done to the kingdom, in respect to its agriculture, is five times greater than the

produce

produce of the tax. Exempt from duty, the use of tile
be general, by which means all the straw would be d
purpose of subsistance for cattle, or manure. The
comfortable farm-house, with its neceſſary appendages
at about 250l. That of a barn, roomy enough for
and capacious enough to hold twenty or thirty load
Stables, ſtalling, pig-ſtyes, &c. 150l. more, maki
550l. This expenditure will be ſufficient for a far
dred acres. The practice, lately introduced, of pla
on a declivity, cannot be too much commended; a w
modious ſtall for oxen, covered by one roof, is th
The barn floor thus elevated, is rendered more du
ſubject to vermin; the corn is kept more dry and
a ground floor; nor can it ſlip through the barn floo
covery, and I know of no poſſible inconvenience t
pany this plan. Barns, ſuch as theſe, are placed wi
aſpect, and the arches of the ſtalling front that w
thereto, is a capacious yard, with proper cribs for
where the animals feed, and retire at their pleasur
fortable lodging under the barn,

Nothing is neceſſary to complete the farm yard,
reſervoir of water, and as the ſituation is on a
pond is ſoon filled, by the common current of rain
ſupplied by ſhoots from the roof of the barn.

On one farm, ſituate in the parish of Compton M
proprietor has made a ſemicircular farm yard, an
wall on the *outſide*, and round pillars on the *inside*,
of about fourteen feet from each other, and coverin
ſtrong lugs or poles, has made an excellent *staddle*
ſecure it from vermin, he has placed a row of flat
diſtance from the top, both of the wall and pillars i
ſide. This row of ſtones projects about eight inch
cloſe together, that no vermin can gain access to the
ſtaddle (as it is here called) he places the whole of
except that portion which he intends to thresh f
moiſture of the air renders the wheat on theſe hil
cold, that the ſale in the winter ſeaſon is very slack
moſt inſtances be avoided. In all my farming exc

saw a more comfortable covering for cattle, nor a better foundation for a corn mow, and under the supposition of its being threshed in the summer months, no possible inconvenience can attend it, for the staddle is cleared, and ready for harvest to take another burthen.

The next, and not the least important appendage of these farms, are *pools* or *reservoirs of water*; for on hills so elevated, few springs can be expected. Nothing more strongly verifies the truth of the old adage, "Necessity is the mother of invention," than the skill exhibited by the masons of this district in buildings of this nature. Scarely ever do these pools let through the water, and the cost, supposing it to be of the following dimensions forty feet long, sixteen wide, and six feet deep in the middle, may be thus stated.

	£.	s.	d.
Digging out for foundation	2	2	0
N. B. In most instances this will furnish a sufficient quantity of stone for the building			
Masons labour	10	10	0
300 Bushels of lime	3	0	0
10 Load of clay	1	0	0
8 Load of coal ashes	0	8	0
	17	0	0

A pool of these dimensions, if properly situated, will supply 80 or 100 acres with a sufficiency of water for the stock throughout the year; and if well made, may be kept in repair for sixpence a year.

As *lime* is the grand manure of this district, by which the improvements of cultivation are in a great measure brought about, kilns for burning it are numerous, and generally thought well constructed; their form is that of a French bottle, the height 16 or 17 feet, the length of the neck, in which the calcination is wholly effected, 8 or 9 feet; its diameter 4 feet, and the diameter of the belly in the largest part 12 feet. They are built on the side of a hill, by which means the top is on a level with the adjacent *rock*, and the cost is as follows:

Digging out the concavity . . . . . .
(This will furnish stone for the building.)
Building . . . . . .
Lime and ashes . . . . . .
Building a shelf-house for the kiln to deposit the lime, and covering the same . . . . . .

In such a Kiln, may be burnt 480 bushels of lime and this will consume 15 quarters, or 120 bushels of re such as is not commonly used for any houshold purpo coal costs at the pit twopence per bushel, and the dist six miles, the carriage is threepence, the prime cost o therefore is fourteen pence per quarter, as the following shews:

Weekly Expence.				*Weekly*
15 Quarters of coal, at 3s. 4d.	2	10	0	
Limeburner, 4d. per quarter, digging stones and burning	1	0	0	60 Quarters, 3l. 10s.
£.	3	10	0	

The lime produced by one of these kilns, will amp 3 acres per week; and I leave my readers to determin kilns of this construction are, or are not to be prefere in shape of an inverted cone. The largeness of the sur last mentioned, must I should think, require coal of a lity, and consume a greater quantity.

Lastly, let us take a view of the public roads. Th 40 feet wide, and are stoned 12 feet.

It is usual to stone these roads one foot thick in the m nine inches at the sides making thereby a gentle curve.

	s.	d.	
First forming	0	6	per rope of 20 feet.
Digging 8 load of stone (25 cwt. each)	2	0	
Wheeling or halling, do. . . .	3	0	
Breaking, do.	3	0	
	8	6	

Note, The expence of halling must vary according to the distance of the tone.

The inclosure being now finished; buildings erected; pools made, and public roads formed; let us now take a survey of the expence of cultivating these lands, under the following heads; ploughing, manuring, cropping, and harvesting. In this I shall endeavour to draw information from reason and experience, and shew upon what grounds the practices are founded, so that my readers may then take or refuse them, according to their own judgments.

I have before stated that the soil of Mendip Hills is a fine mellow mould, intermixed occasionally with less fertile ingredients, such as stones, gravel, clay and the like, and according as these are greater, or lesser in quantity, the soil is worse, or better. In all cases the husbandman may distinguish the general nature of the soil, by its aspect on the surface, or by the produce thereof. Where the fern grows in great luxuriance, there he is sure to find deep, good land; but weak, low furze, rushes, or white grass, are symptoms of poverty.

The object to which we now proceed in our disquisition may be deemed the most important and interesting, being nothing less than the process, by which this comparatively barren soil is converted into fertile and productive land: and on a nearer inspection, it will probably be allowed, that few instances can be adduced of attempts more successful to individuals, or more beneficial to community. This soil does not pour forth its vegetable productions spontaneously, but its qualities and strength are such, as to produce great returns, if properly cultivated and manured; and were an ancient inhabitant of these regions to return to life, he would be at a loss to know the name of this apparently new country.

The months of September or October are the best to commence the tillage. The instrument made use of, is a strong foot plough, without wheels, cost 2l. 2s. The breadth of the plit about 10, and the depth 4 inches. Four horses, or six oxen will turn about three fourths of an acre in eight hours. A man is employed to go after the plough, with a spade to repair balks, to dig up stones, and to lay the plit flat: this ploughing may be valued from twelve, to twenty shillings per acre. In this state it remains to be mellowed by the winter frosts, till March, when black oats are sown, after the rate of six or seven bushels per acre, and harrowed in by four turns of the harrow on the same ground. A few farmers previous to this sowing, have lately adopted the plan of *hacking* the surface at the expence of four shillings per acre: by which means less seed will do, and the same is more regularly distributed, and better covered, beside the hacking and harrowing is not more expensive than the troublesome dragging before-mentioned: the expence of either of these operations may be estimated at seven shillings per acre.

After this it is rolled at an expence of one shilling per acre. Nothing more is done till harvest, and the average produce may be set at twenty-five bushels per acre, the straw of which will pay for harvesting and threshing (that is about eight shillings per acre.)

Soon after harvest, or indeed at any part of the winter, the ground is cross plowed with the *double furrow* plough, value six shillings per acre. Harrowed in March, value two shillings, and in April the liming is begun, Four horses and two men, with two carts, holding 32 bushels of lime each, (if the kiln be not at a greater distance than one mile) will cover $1\frac{1}{2}$ acre per day, at the rate of 160 bushels per acre.

The lime is deposited in heaps of one bushel, at the distance of $16\frac{1}{2}$ feet every way. Cost per acre (value of lime included) thirty-five shillings.

Covering these heaps with earth, and afterwards spreading them, (which should be done as soon as the lime is dissolved) are worth one shilling and six-pence per acre.

After this the ground is well harrowed, two shillings per acre; then plowed very thin or raftered, five shillings; harrowed again two shillings, and in this state remains for the seed earth. It is found highly advantageous to expedite the liming, and to finish all the work previous to the seed earth by the middle of July; so that all the stock, such as cows, sheep, horses, &c. may have free access to the fallow, or may be frequently driven over it, for the purpose of making it close and compact. The latter end of September, or the month of October, is the time for sowing, and this is done in two ways, some sowing under furrow, others harrow in the seed; the latter I think preferable, as the uncorrupted sward, furze, &c. are by harrowing brought to the surface, and are a great defence to the infant plant during winter; whereas if buried, they keep the ground hollow, and expose the roots to injury. Which ever way it be done, the last plowing, sowing, and harrowing, will cost about seven shillings per acre, to which add $2\frac{1}{2}$ bushels of seed, value fifteen shillings, and the whole expence has been enumerated. No weeding is necessary, nor is there any other disbursement, save rolling in April, which should be performed with a very heavy roller, at the expence of two shillings per acre.

Let us now recapitulate the expences, and state the
duce per acre.

First Year.

Dr.	£.	s.	d.
To first plowing . . .	0	16	0
To hacking and sowing oats	0	7	0
To 6 bushels seed . . .	0	15	0
To rolling	0	1	0
To one year's rent . . .	0	8	0
Second Year.			
To cross plowing . . .	0	6	0
To harrowing	0	2	0
To liming (160 bus. per acre)	1	15	0
To covering and spreading	0	1	6
To harrowing	0	2	0
To plowing	0	5	0
To harrowing	0	2	0
To last plowing, sowing, and harrowing	0	7	0
To 2½ bushels seed . . .	0	15	0
To rolling	0	2	0
To two years rent . . .	0	16	0
	7	0	6
Profit	3	12	0
	10	12	6

First Ye

By 25 bus.
2s. 6d.

Second Y

By 25 bus
wheat 6s.

N. B. The straw in both instances will pay for rea
ing, and threshing.

HARVESTING AND THRESHING

The reaping of wheat is generally performed by t
as the ripening is a fortnight later on these hills tha
there is no want of hands. The price from five to
per acre, including cutting, binding, and mowing.
hand griped as it is called, that is, collected within t

hand before the hook or sickle is applied. All the corn, both wheat, barley, and oats, are bound into sheafs and mowed in the field. The price for barley and oats from three to four shillings; beside these prices, the men are allowed for wheat two gallons of beer, and for barley and oats 1½ gallon per acre.

In situations subject to sudden and violent rain, this custom of mowing in the field cannot be condemned, as in respect to wheat, the days cutting is secured every evening, and the lent corn can be put together and secured much sooner than in the common method.

The principal objections are the bringing mice with the sheaves into the barn, or large mow; and the want of sufficient dryness in the corn for winter threshing.

The men of this country are very dextrous in making these mows so as to prevent rain from injuring the corn; and they frequently remain 5 or 6 weeks in the field without suffering any damage.

Wheat is seldom threshed with the straw, but the ears are cut off, and the straw bound in sheaves tied very tight; the circumference of the sheaf at the bond should be six feet; this costs 4d. per sheaf, including the threshing of the ears. A good acre of wheat will produce three dozen sheaves, value 8s. 6d. per dozen. And by this method the firmness of the stalk is preserved, and rendered more valuable for the purposes of thatching buildings, &c. &c.

Barley and oats are threshed by the quarter. Price from 1s. to 1s. 6d. per quarter.

A good acre of oats will produce 2 waggon load of straw.

The land is now considered in its highest state of strength and vigor; and it is thought by most farmers, that every succeeding year reduces its value; nor can this be wondered at, when the subsequent course of cropping is stated.

It is no unusual thing to have three, or four successive crops of corn, nay sometimes five or six, without an intervening fallow, or fallow crop; greatest part of the straw is sold, nor is the land sown with artificial grasses, till it is no longer able to bear corn.

This mode of treatment, together with the coldness of the climate, has hitherto operated as an effectual bar to the settlement of opulent, and more enlightened farmers; but I am well persuaded, that if even one of that description were to settle here on a farm of

a proper size, viz. 5 or 600 acres, he would, accord
farmers phrase, " find himself at home," and his exan
soon be followed by many others.

Cabbages, turnips, potatoes, carrots, parsnips, vet
oats, clover, and all artificial grasses, may be grown in
est abundance and perfection.

The land is never glutted with rain, nor subject t
and the fogs, (of which so much is said) are prevalent
winter season.

It cannot be denied but that a cold, wet summer, s
of 1792, is peculiarly unfavourable to the ripening of co
of such elevation, but in summers like the last, few cou
vie with it.

Though I am no advocate for farms of an *excessive* ex
think, that on soils, and in situations such as Mendip
should not be less than 4 or 500 acres. I mean sufficien
flock of sheep for the purposes of *folding*, which should
tingly pursued through both winter and summer month
fallows in the summer, and on the grass land, or in the
the winter- A wether flock would be best calculated
pose, and it is a matter of doubt with many judicious far
ther sheep of that kind are not equally profitable with
stock, even in situations more mild and temperate.
system of management, 100 acres might be manured
with the fold which joined with occasional liming; an
cation of the barton dung would keep the land in a prog
of improvement, and at the least possible expence.

Formerly the ploughs used here were the most aul
ill contrived, that could be conceived, but they have
measure given place to the *double furrowed* plough, w
troduced to this neighbourhood by a speculative man
farmer on these lands, disregarded, and despised by
husbandmen. At first he became an object of ridicule
him; even his friends considered, that ruin must be th
consequence of such rash, and ill-judged speculation.
by means of activity and perseverance. he has not on
the storm, but has the satisfaction of seeing the ex

he has set, followed by the inhabitants of many surrounding parishes.

Though common farmers are for the most part backward in adopting new plans, yet I never knew any *valuable* discovery that they did not sooner, or later fall into. So it happened with the double ploughs. For ten years did the person above alluded to use this instrument, and was constant in season, and out of season, in recommending it to others; (for they who have a true taste for agriculture, enjoy themselves in the communication of every useful discovery) but all in vain, the more warm he was in enforcing its utility, the more reluctant were the common renters in adopting the use of it; and in all probability it would have remained to the present day, undistinguished for its superiority, had not the same been manifested at the different trials of ploughs exhibited under the direction of the Bath Agricultural Society.

At present scarce any other plough is used after the first breaking; and I believe I may truly assert, that in comparison with the old ploughs of the district, no less than 100l. per year is saved on a farm of 500 acres. Another mode of management has been for many years past introduced by the person before alluded to, namely, ploughing by the *acre* instead of the day.

The contract is thus conducted; the master finds oxen and food, and the ploughman labor and a driver. The latter is also bound to attend on the cattle at all times, even when debarred from work by rain, snow, frost, or any other cause. The price is 2s. 2d. per acre for the ploughing of the rough Mendip lands when first inclosed, (this is done with a single plough) and 1s. 2d. for all other ploughings of every description.

By this system of management he has annually had more ground ploughed by *one* team, than his neighbours by *two*; and it has been no unusual thing for his man and boy to earn regularly per week 17s. 6d. that is for 2½ acres per day on an average. Nay, his man has repeatedly ploughed with six oxen (in yokes) 20 acres of land, statute measure, in 48 hours; I mean in six successive days, reckoning eight hours per day: the breadth of the plit (according to agreement not exceeding nine inches, nor the depth less than four inches,) if the soil was deep enough to admit thereof.

Let us pause here, and seriously consider the advantages
tract in comparison with *daily* labor. The English laborer
turally disposed to vigorous exertion, if encouraged thereto,
by an increase of wages, or by the exhilarating influence of
cheer.

Do we not see in times of harvest a degree of activity,
bited unknown at other times of the year? and this at a
when the heat of the weather naturally induces fatigue.

Do not the manufacturer and artisan, almost of every descr
have recourse to contract labor? and though their workme
from 10s. to 30s. per week, do they not find their account
doing, from the emulation which it excites, and the perfec
workmanship which it produces?

Must it not be acknowledged, that in those countries wher
labor is the prevailing mode, a slow and indolent habit is gen
which neither promises nor threats can intirely overcome,
great injury of the commonwealth, as well as of the farmer.
pose we allow the average rate of daily labor to be 16d. and
that by contract, men will be excited to earn 20d. what an a
of useful labor would be created, taking it in an aggregat
of view.

But I must not enter too widely into this field of discussi
shall only add, that in respect to the operation of ploughi
method now suggested can only be subject to two objections.

First the possibility of the cattle being injured by too gre
tion; and secondly, imperfection in the execution.

Both these are easily obviated by stating, that the eye
master may see, and his judgment may direct, so as to precl
possibility of imposition, without detection.

Dispatch at particular seasons of the year may be consid
invaluable. particularly in respect to spring and summer cro
dry and favourable season for sowing occurs in March; by c
labor, and improved instruments, you are enabled to plou
sow *double* the usual quantity. The increased produce in c
son with a sowing in April, may be fairly calculated at m
the rent of the land, exclusive of the comparative cheapness
same argument will hold good, in respect to flax, hemp,
potatoes, cabbages, summer fallows, &c, &c.

It is the general opinion of farmers in this district, that oxen are preferable to horses for the purposes of ploughing, but for harrowing and all other purposes the contrary.

The expences of keeping a team of each may be thus stated, and it will appear that the superiority of oxen is not so great, as some sanguine men have stated.

Horse team (4) the first cost including harness cannot be estimated at less than 100l.

	£.	s.	d.
To 30 weeks keeping at hay, 12 ton at 40s. . . .	24	0	0
Corn throughout the year	30	0	0
To 22 weeks keeping at grass, at 3s. 6d. each horse	15	8	0
Repairs of harness	2	12	0
Farrier and shoeing	4	0	0
	£. 76	0	0

OX TEAM (6)

The first cost of these, supposing them to be of the beſt North Devon breed, and four or five years old, yokes, bows, and chains included, 70l.

	£.	s.	d.
To 26 weeks at hay. 24 ton at 40s.	48	0	0
26 ditto at grass, 2s. 6d. per week each ox . .	19	10	0
Repair of yokes and bows, and chains . . .	0	10	0
	£. 68	0	0

Some farmers think that three horses are equal in exertion to six oxen; if that be admitted, the expences of the horse team, will be less than those of the oxen.

If an accident should happen whereby a horse is lamed, the value is much more lessened than in the case of an ox; but in all other respects, they stand on equal ground; for horses, if purchased at the age of four or five years, are improving in value for two or three years, as much, or more, than oxen. And every intelligent

farmer must be sensible of the folly of keeping a horse
six or seven years old; they should then be transferred t
carriers, &c. and agriculture should only be the medium
a young horse becomes by gentle labor, inured to more
cipline.

Having already stated that lime is the great article
improvement of these hills, I shall only add, that instan
be produced of lands letting at this time for 30s. per ac
forty years ago were not worth 4s. and the beginning of
improvements has been by lime, whereby the acidity
impregnated with mineral exhalation, has been corrected,
raised on them as good as those on improved fields; a
less wonderful than true, that thirty cart load of rotten
acre, *previous to liming*, have had no sensible effect; but
land has been once limed, the operation of dung is as p
here, as on other lands. Surely this circumstance will p
these hills come under the description of barren land, as
in the statute of Edward III. and as such be exempt fro
ment of tithe for seven years. Yet this principle is now
and though the clergy have in all the inclosures heretofo
rated, honorably and generously relinquished any claim,
attempted by a lay impropriator, who of all others has r
complain; as a foundation is laid for considerable augm
income, (*after seven years*) from a source whence he ha
derived no benefit.

Tithe N.P

The matter is now before the court of exchequer, and
cision all ambiguity in the meaning of that act of parlian
I trust, be done away.

Before we leave the subject of liming, it may be right
my readers, that some have dressed their old pastures
lime, by which the moss has been destroyed, and a fin
produced, highly grateful to the palate of all sorts of sto
lime after the rate of 160 bushels per acre is put on the
after it is mown, and its effects are very durable; being p
for fifteen or twenty years, and it quite alters the natu
coarse, sour grass, to which old layers are very subject.

I confess I am ignorant of the whole cause whereby lim
such happy effects; but however unknown the cause, all a

is the most cheap, and the most efficacious manure that the husbandman on these hills can have recourse to.

Burn baiting, that is, cutting off the turf, drying it, piling it in heaps, and afterwards burning it to ashes, has been tried, but no sensible good effect, either immediate, or distant, having been experienced, the practice is relinquished; and I rather think this process is best calculated for cold, rushy, and heathy grounds, of little or no value.

The effect of burn baiting, even on lands best adapted to this process, does not last more than three or four years, and if followed up with successive corn crops, the strength of the land is so exhausted by the forced fertility, that a rest of eight or ten years is necessary to prepare for its repetition. If burn baiting be practised, it should be for *turnips*, after which only one crop of barley or oats should be taken, and artificial grasses sown therewith. If this rotation of crops be adopted, I see no reason why lands to which the manure is congenial, should be *wholly* denied the advantages of the practice.

A great deal in these instances depends upon the skill and judgment of the farmer. If he be wantonly debarred from the use of a valuable manure, he is injured; and if on the other hand, he uses it without discretion, his landlord suffers, and the most indefatigable industry will not save himself ultimately from loss, and perhaps ruin.

Of all the crops to which the land of this district is applied, there is none so useful as the potatoe. Not many years since this root was confined to the gardens, but lately it has been introduced into the field with great success; it is hardy enough to bear the exposure, and requires no extraordinary care or management in the cultivation.

The best manure is rotten dung, or the fold of sheep, and as there is no great hazard of success, this root is very generally cultivated, and is considered as the staple article of food in a poor man's family.

It is no uncommon thing for a family consisting of father, mother, and five or six children, to consume twenty sacks per year, of 240 lb. weight each sack, or 20 lb. a head per week, allowing twelve weeks cessation from this species of food; indeed the chil-

dren nearly subsist on it, and a deprivation thereof would
whole family to the parish. The crop varies from 60 to
per acre.

Potatoes are also grown for the use of stock, and are
useful, particularly in the months of February, March,

From a series of experiments made by the writer of
and communicated through the channel of the Bath Soci
it appears that their value, when applied to the fatting of h
not be made to exceed 2s. 6d. or 3s. per sack of 240 lb
other experiments since made, it is probable, that no gr
can be affixed to them if applied to the sustenance of
stock. However, this should be no discouragement, fo
land, and with good management, they may be grown
per sack, and will furnish the farmer with a certain sup
in those months wherein he is most distressed.

Many object to the cultivation of this root *on a large s*
dering it in the light of a great exhauster. If the prod
crop so productive as this is, be sold from the farm, and
at so great a distance that no return can be made, I wil
ledge that such must be the effect; but if potatoes are co
the premises, the return of manure from the consumpt
acre, will be sufficient for *two* or *three*, and as the po
ought always to be highly manured, no deficiency need
in the subsequent crops of corn, grasses, &c. particularl
be banished as a succeeding crop, and barley or oats sub
its place.

It is now a common practice instead of boiling, to dre
by *steam*, and by so doing, the quality is rendered more f
and a considerable saving is made in the article of fuel.

The breed of cows on these hills is of the *mixed so*
worthy any particular notice, except their being good
The sheep are for the most part the native Mendip, a so
thrive on the poorest soil, and fatten on such land as wi
keep other sorts alive; pasturage ever so dry and expose
this kind. They are very hardy and their wool is fine
son is also excellent for the table, being full of gravy a
flavor. Sorts of a larger kind have lately been introduc-
the Dorset and South Down, and there is no doubt bu

ficial grasses, accompanied with turnips and other winter provender, will support these, or indeed any other sort in the highest perfection.

The large heavy loaded sheep of Leicester and Lincolnshire have never been tried; but it might be worth while to make the experiment; and as these sheep are well cloathed, the coldness of the climate could not, I should think, affect them.

The great doubt lies, whether this sort of sheep would bear folding; if not they are inadmissible, as folding is the "*sine qua non*" of good husbandry on a sheep and corn farm.

Under the auspices of the Bath Society, unto which his majesty was graciously pleased to present a Spanish ram, a new breed of sheep has been lately introduced, which bids fair to exceed all othes of equal size in *quantity* and *quality* of wool, accompanied with a carcase by no means despicable; but as these crosses of breed are found sometimes to degenerate, I shall not be too warm in recommendation, till a farther trial has been made, and experience has confirmed their superiority.

On the northern declivity of Mendip hills are some very good coppice woods; the principal are Blagdon, Hasel, and Ubly, containing in the whole about 100 acres.

These woods are very romantic and picturesque, and being secured from the south west breezes, the growth is very rapid, and the profit greater than any will believe who have not had experience thereof; beside these profits may be made annual, and are in themselves more certain than any other produce. You have only to divide a coppice of 48 acres into 12 parts, that is 4 acres per year, 12 years growth. The more ashes in these coppices the more valuable, as the poles are very saleable at the coal pits, and I have known many instances of an acre producing in value 16l. net after the expences of cutting, carriage, &c. have been deducted. This is nearly 28s. per acre per annum, for the whole 48 acres, beside the accumulating value of timber trees. It is more profitable to cut coppice wood every 12 years, than to let it remain longer. On the southern declivity of Mendip hills, there are also some coppice woods, stoke wood the principal, but these being exposed to the western breezes, are not so productive.

In the eastern part of this district there are also some large and productive woods, such as Mells, Leigh, Edford, Harwich, Compton, Camely, &c. these being near the coal works are very valuable; interspersed also are many beautiful plantations, which are not only an ornament to the respective seats to which they belong, but are in themselves a fertile source of annual profit.

On land properly situated, no speculation can be more profitable or more pleasing than planting; the only objection is the length of time required to bring it to perfection; but surely this ought not to have much weight, as the benefit must accrue either to the planter, or his heirs; and certainly there is no way so easy of raising fortunes for younger children as by planting.

The Mendip hills are also famous for their mines, particularly of lead and lapis calaminaris. The former are nearly exhausted, or at least the deep working is so incumbered with water, that little can be done, and in all probability millions in value may remain concealed in the bowels of this mountain, till spirit enough be found in the country to perforate it by cutting a level or audit, through its base, namely from Compton Martin to Wookey Hole.

The distance is about 5 miles, and the depth from the surface about 150 yards; such a tunnel would not only convey off all water, but the driving it, or the sinking of the shaft or perpendicular pits, might lead to a discovery of veins of lead hither unexplored, and perhaps as valuable at that was at West Chewton, which tradition says yielded 100,000l. within the space of an acre. What the expence of such an adventure might be, I cannot exactly ascertain, but for argument sake, let us suppose it to be 100,000l. A thousand subscribers at 100l. each would suffice, and as no great number of men can, for want of room, be employed at the same time, I would propose that the principal money be vested in government securities, and the *interest only* expended; this would keep in constant pay more than 100 workmen, and in all probability before 10,000l. were expended, discoveries would be made highly beneficial to the adventurers, and to the public, and even under the worst supposition, the only loss would be that of the interest of 100l. to each individual.

In times past many thousands per year have been annually paid to the see of Wells for the Lord's share, (that is one tenth) of the

lead dug on the forest within the parish of Wells *only*, and is it not more than probable that lead, like coal, may be most valuable in the *deep?*

In the parishes of Rowberow, Shipham, and Winscomb, there are valuable mines of lapis calaminaris: this mineral is sometimes found within a yard of the surface, and seldom worked deeper than 30 fathom. Between four and five hundred miners are constantly employed in this business, and the average price is about 5l. per ton. In the parishes of Compton Martin and East Hartry are also many mines of a similar nature, and a considerable number of men are constantly employed therein.

Having now comprised in as small a compass as I could, the detail of the husbandry of these hills, I shall now leave my reader to pick the corn from the chaff, and shall conclude by giving some heads of a lease, comprehending many needful restrictions and covenants between landlord and tenant; to which I shall add a copy of the Laws and Orders of the Mendip Miners, as settled in the reign of Edward the Fourth.

CLAUSES *on* LEASES.

1st. Not to convert into tillage any pasture or meadow land without leave.

2d. To feed and mow the grass land alternately.

3d. Not to pare or burn any land without leave.

4th. Not to plant potatoes *for sale* without leave.

5th. To spend all the hay and straw on the premises, and to leave all the dung and straw to the succeeding tenant, without any acknowledgment.

6th. Not to let any parcel of the land to any under tenant without leave.

7th. To keep the messuage dwelling-house, barns, stables, &c. in good repair, on being allowed rough timber, and the labor of the thatcher.

8th. To pay all taxes and assessments, (land tax excepted).

9th. Not to cut down or lop timber trees, or lop any pollards without leave.

10th. To permit the lord, or his assigns, to search
and to hunt or shoot on the premises.

11th. If pasture land be converted into tillage, the
the first or second year be manured, with not less than 1
of lime per acre; and after such manuring to have tw
corn only, and with the second crop to be sown down in
dry like manner with artificial grasses.

12th. At the conclusion of the lease to leave a sufficien
of tillage to the succeeding tenant, well fallowed in an hus
manner by proper ploughing, for which the in-coming te
pay a proper acknowledgment.

13th. To keep all the fences, gates, stiles, &c. in go
and to leave them so at the end of the term.

14th. To prosecute, if called upon by the landlord,
trespassing on the estate by hunting, shooting, fishing,
pensation being made to him by the landlord, for all ex
curred by such prosecution; to which is added all othe
covenants.

THE LAWS AND ORDERS OF THE MENDIP MINERS.

BE it known that this is a true copy of the inrolled in the king's exchequer in the time of king Edward the Fourth, of a debate that was in the county of Somerset, between the lord Benfield, and the tennants of Chewton, and the prior of Green Oare: the said prior complaining unto the king of great injuries and wrongs that he had upon Mendipp, being the king's forreſt, the said king Edward commanded the lord Chock, the lord chief justice of England, to go down into the county of Somerset to Mendipp, and sit in concord and peace in the said county concerning Mendipp, upon pain of high displeasure. The said lord Chock sate upon Mendipp on a place of my lords of Bath, called the *Forge:* whereas he commanded all the commoners to appear, and especially the four lords royals of Mendipp, (that is to say) the bishop of Bath, my lord of Glaston, my lord Benfield, the lord of Chewton, and my lord of Richmond, with all the appearance to the number of ten thousand people. A proclamation was made to enquire of all the company how they would be ordered, then they with one consent made answer, that they would be ordered and tryed by the four lords of the royalties; and then the four lords royals were agreed, that the comminers of Mendipp should turn out their cattle at their out-lets as much the summer as they be able to winter; without howndıng or pounding upon whose grounds soever they went to take their course and recourse. To which the said four lords royals did put their seals, and were also agreed, that whosoever should break the said bonds should forfeit to the king a thousand marks, and all the comminers their bodys and goods to be at the king's pleasure or command that doth either hound or pound.

The old ancient occupation of miners in and upon MENDIP *king's forrest of* MENDIPP *within the county of* SOME *one of the four staples of* ENGLAND, *which have be used and continued through the said forrest of* MENDI *time whereof no man living hath not memory, as hereaf ticularly ensue the order.*

1. FIRST, that if any man whatsoever he be, that to venture his life to be a workman in the said occupat first of all crave licence of the lord of the soyle where pose to work, and in his absence of his officers as the bailiff and the lord, neither his officers can deny him.

2. *Item*, That after the first licence had, the workma need to ask leave again but to be at his free will, to the forrest, and to brake the ground where and in w shall please him to his behalf and profit, using himself truly.

3. *Item*, If any man that doth begin to pitch or gro his hackes through two ways after the rake. Note tha throw the hacke must stand to the girdle or wast in th and then no man shall or may work within his hackes vided always that no man shall or can keep but his groof and his mark.

4. *Item*, That when a workman have landed his carry the same to cleansing or blowing to what m please him for the speedy making out of the same. So truly pay the lord of the soyle where it was landed hi is the tenth part thereof.

5. *Item*, That if any lord or officer hath once giv any man to build, or set up any hearth or washing-ho cleanse or blow oar, he that once hath leave shall kee or give it to whom he will, so that he doth justly pay which is the tenth pound, which shall be blown at hearths, and also that he doth keep it tennantable as doth require.

if any man of that occupation doth pick or steal
to the value of thirteen-pence halfpenny, the lord
arrest all his lead works, house and hearth, with
works, and keep them as safely to his own use,
e person that hath so offended, and bring him
s, or his work, and all his tools or instruments to
belongs as he useth, and put him into the said
on all together about him, and banish him from
efore the miners for ever.
at person doth pick or steal there any more, he
the law, for this law and custome hath no more

every lord of the soyle ought to keep two miner
ar, and to swear twelve men of the same occupa-
ress of misdemeanors touching the mineries.
t the lord or lords may make and grant manner of
t for strife between man and man, for their works
d or earth. Secondly for his own dutys for lead or
r he findeth it upon the same forrest.
at if any man by means of misfortune take his
ing of the earth upon him, by drawing or stifeling,
in time past many have been, the workmen of the
are bound to fetch him out of the earth, and to
ristian burial at their own costs and charges, al-
rty fathome under the earth, as heretofore hath
the coroner or any officer at large shall not have to
ny respect.

MANUFACTURES.

THE principal manufactures in this district are th
len cloth, and knit worsted stockings, which in
Froome, as well as Shepton Mallett, are considerabl
the number of hands therein employed, must have so
the agriculture of the neighbourhood.

The town and parish of Froome are found to co
1700 families, or about 10,000 people; more than
which are actually, and immediately supported by t
tures spoken of; besides a vast number of the lower c
ple in the adjacent villages. In this town the annua
cloth manufactured, has lately been found to be more t
yards. In Shepton the inhabitants may be reckoned 6
cloth manufactured 120,000 yards.

Whether the introduction of machinery for the exp
ing, spinning, &c. will enable the manufacturers to
cloth, or whether a number of the poor must be driven
sistence by other labor, may perhaps, be best ascertain
ment. If the revival of the export of kerseymeres a
should take place, and sufficient stock of wool can be
decision will be in favour of the former part of the q
all will be well; but should the present check on the
continue, or should it be found that by the hands now
and the machinery already in use, the whole stock of
is most certainly a limited article) shall be wrought i
nine or ten months of the year, the full grown and ag
in this manufacture will be seriously distressed. Lan
in the neighbourhood will be heavily burthened; and
must migrate and seek subsistence by other empioy wh

his be the case, many other professious and em-
are either mediately or immediately counected
cture, or otherwise dependant on the populousness
rhood, will be ultimately affected. Further, the
he western part of Wiltshire, and north western
re, must partake of the consequence af such a mi-
lands about Frome, or Shepton, not being well
ge, the inhabitants are chiefly supplied with corn
those counties. The assistance of machinery was
by the manufacturers of Frome and Shepton from
y; for had they continued in the old method,
have been lost, and indeed *now* the north country
beforehand with them, particularly in the appli-
the best "*primum mobile*" of all machinery.

be feared that the improvements already made, and
on, will *ultimately* be the means of disseminating
other countries, to the prejudice of the export

tirely quit Frome, or as it was anciently called
, it may not be amiss to advert to the forest from
an appendage to its name. The ancient forest of
verge of which the town of Frome stands) appears
zed a woody vale of about 20,000 acres; about
are now cleansed and converted into pasture and
h a small portion of meadow; the remainder con-
te of coppice wood. The chief sorts of timber in
e oak and ash, which, though not of large growth,
of their kinds, and find profitable markets in the
the oak selling from 50s. to 3l. 16s. per ton, and
3l. The underwood is chiefly hazel, ash, alder,
h; some of which at 18 or 20 years growth sell as
acre. To state the profit of these coppices in a
would remark, that the annual value per acre in

timber and underwood, (I speak of those coppices w
wards the northern end of Selwood) is from 15 to 3
Much of the open land within the limits of this ancien
not net more than 10 or 12 thillings per acre.

MIDDLE DISTRICT.

THE middle division of the county is the largest, being that part comprehended between the Mendip Hills on the North East, Quantock Hill, and the foreſt of Neroche on the South West; parts of Dorſetshire and Wilts on the South East, and the Bristol Channel on the North West. It includes the city and borough of Wells, the boroughs of Bridgewater, Ilchester, and Milborn Port, and the market towns of Axbridge, Shepton Mallett, Glastonbury, Brewton, Castle Cary, Wincaunton, Somerton, Langport, Yeovil, South Petherton, Ilminster, Crewkerne, and Chard, together with their adjacent Parishes and Villages, amounting in the whole to between four and five hundred thousand Acres.

The climate of this district may, for the most part, be pronounced mild and temperate, but on so varied a surface an uniformity of soil cannot be expected.

On the borders of Wilts, and Dorset, the lands are high, and partake of the soil and management of those counties; sheep walks, and corn, constituting the principal parts of husbandry. The farms are here large, and *folding* is unremittingly pursued. Wheat is seldom sown without *two* foldings; and fallowing every four or five years is the general practice. The corn produced is of a good quality, and finds a ready sale at Wincanton, Bruton, and other markets. The next division of this district, namely the country around Shepton, Bruton, Castle Cary, Ilchester, Somerton, Langport, Petherton, and Ilminster, is exceedingly fertile, both in corn and pasture; abounds with good orchards and fine luxuriant meadows, and is altogether as well cultivated, and as productive as most parts of the kingdom. In ſome parts flax and hemp are produced in great abundance, which together with wool furnish the raw materials for extensive manufactories. Westward of this, Polden, and Ham Hills rise boldly to the view, and constitute some of the inferior lands of the county. The soil on these

hills being very thin, and the estates disposed in small p
common field, no considerable improvement can be effecte
a fundamental change in the system of management.

Hence we descend into the marsh or fen lands, whi
vided into two districts, namely, *Brent Marsh* and the *B*
or *South Marsh*. Brent Marsh is that portion of land
hended between Mendip Hills and Polden Hill, on the
South, Bridgwater Bay on the West, and extending to
Glastonbury on the East.

This marsh may also be divided into two parts sepa
tract of elevated land on which stand the parishes of
Mark, Blackford, Wedmore, &c. through the northern
the river *Axe*, emptying itself into the Bristol Channel
and through the southern the river Brue, emptying
Bridgwater Bay near Burnham.

This country has been heretofore much neglected; be
tute of Gentlemen's houses, probably on account of th
waters, and unwholsome air; but of late many efforts
made to improve the soil, by draining and inclosing under
of acts of parliament. The benefit resulting therefrom,
astonishing. The rhynes and ditches necessarily cut to
property, together with the deepening the general ou
charge so much of the superfluous water, that many thous
which heretofore were overflown for months together, and
of little, or no value, are become fine grazing, and dairy
the great emolument of the individual possessors, as w
benefit of the community.

The quantities thus inclosed in Brent Marsh within twenty years past, under authority of Parliament, are as follow: (*viz.*)

	Acres.	
Wedmore and Mear	4400	together with 1100 acres of turf bog as yet unimproved.
Compton Bishop	300	
Glastonbury	1500	Do 300 Do
Westhay, &c.	1700	Do 1000 Do
Mark	2000	
Huntspil	1200	
Shapwick	100	
Blackford	900	
Wookey	900	
Westbury	450	
Bleadon	400	
West Pennard	250	
Eddington	1000	Do 400 Do
Stoke and Draycot	800	
Nylands	350	
Wells	1150	
	17400	2800

Of these 17,400 acres, six parts out of seven are cleared of stagnant water, and rendered highly productive; on the turf bog but little improvement has hitherto taken place. There remain about 3000 acres to be inclosed, which (the turf bogs excepted) will compleat the division of all the moors within the Brent Marsh district. It is not to be understood, that the local drains, under such a variety of acts, and at such different times, can have the most perfect influence on the country, particularly when it is considered that the river Axe has no barrier to the tide, which flows several miles and choaks the lower part of it with *slime*, to such a degree, that many thousand acres adjoining the upper parts of the river are, in consequence thereof, very much injured. Were a barrier with proper sluices erected near the Bristol Channel, some of the most considerable windings of the river shortened, and the shallow parts deepened, not only the moors but the *old inclosures* would be greatly benefited thereby.

The river Brue drains a much more considerable part
Marsh, than the Axe, and has a barrier to the tide (w
there no leſs than twenty feet in height) with sluices th
Highbridge, but its foundation, and the apron and ci
sluices are at such a height above low water mark, that
is very imperfect, and the lowest lands, which lie some
the river, are frequently incommoded by the land floods.

On the confines of the Brue, are two heath or turf b
on the north side containing about 3000, and the oth
south containing about 6000 acres.

On these bogs scarce any pasturage at preſent grows.
a composition of porous substances, floating on water and
it like a spunge. They are observed to rise with much
sink in dry weather. The principal use to which they a
priated, is that of fuel to the surrounding parishes. A
object of the first importance to the country to have
perfectly drained, and consolidated, I shall endeavour
a plan whereby this deſirable effect may in my opinion b

The cause of the inundation and drowning of this le
from the outfalls being choaked up either by the collec
mud in the river, or by elevated land lying between i
Bristol Channel. Of course nothing more is necessary
moval of those obstructions to the outfalls, which will c
passage and quick current to the land water; this bein
the turf bogs which are now five, or six feet higher tha
cent land would subside, and the porous earth becom
dated, and fit for all the purposes of vegetation.

The annexed plan, drawn by Mr. White the surveyor
ciently explain the object in view, and excite the atten
parties interested.

By the levels, thus delineated, (the accuracy of whic
depended on) it appears, that the spring tides are nearly
with the surface of the turf bogs, and that by the prop
an additional fall of ten feet will be acquired. Such a
duced to an inclined plane of a foot in a mile, will be
clay of the bog, and consequently discharge all it
waters.

A farther explanation is unnecessary, as the plan will convey a more distinct idea of the general design, than words.

The present outlet at Highbridge is not only of insufficient depth, but is situate so far *inland*, that the slime and mud choak up the river, and the current is not rapid enough to dislodge the same.

I am aware that many of the proprietors of land on Huntspit, Mark, &c. will object under an idea, that their lands will be made *too* dry, and that in the summer season, their stock will be destitute of water. But this objection, and indeed every other drawn from the apprehension of a too liberal discharge of water, may be obviated, by *placing hatches at the different bridges*, which will be necessary both for public and private accommodation.

An improvement of such magnitude, cannot be effected without the authority of Parliament, and all persons receiving benefit, must be burthened with a rate, proportionate to the advantages derived. This assessment must be made by commissioners duly appointed, but subject to an appeal to the court of Quarter Sessions: and the drains when finished must be put under the view of the Court of Sewers.

I will now endeavour to give a hasty sketch of the probable cost, and subsequent improvement: but in this I do not pretend to accuracy; suffice it to say, that the apparent benefit so far exceeds the utmost latitude of expence, that no solid objection can lie on that head.

BRENT MARSH DRAINAGE.

Dr.	£.		*Cr.*
To Act of Parliament, gaining consents, &c. . .	400	By 9000 acres turf bog improved at the most moderate computation, 15s. per acre, making 6750l. per annum, 25 years purchase	168,750
To sluice at Letterde, near the river Perrott . . .	600		
To 12 miles of new drain, average depth 15 feet	12,000		
To lowering river Brue three miles	1500	By 5000 acres of flooded land improved 10s. 6d. per acre, or 2500l. per annum, 25 years purchase . : .	62,500
To purchase of land . .	2000		
To bridges, hatches, &c.	2000		
To sluice on the Axe near Hobbs boat	500		
To 1½ miles of new drain	1500		
To lowering the river Axe six miles	1000		
To purchase of land . .	1000		
To commissioner, surveyor, &c. &c.	2500		
	25,000		
To ballance of profit	206,250		
	£ 231,250		£ 231,250

On the side of the river Axe the expence of a compleat drainage would not exceed 5000l. and there can be no doubt that the low lands near Axbridge, Cheddar, Nyland, Draycot, Rodney Stoke, Westbury, &c. would be improved at least 2000l. per annum. As a farther stimulus it might be urged, that the air would be rendered more healthful, and the exhalations which now rise from so large a body of stagnant water, and are wafted by the winds to the high corn lands of the Mendip Hills to their great detriment, would be unknown.

Were

Were the turf bogs reclaimed and made productive, I think this district might be considered as one of the most fertile in the kingdom. The vales are formed principally by mud carried down by the rivers which flow through it, and deposited there by the tide's opposing the current thereof; many ages must have been required to effect this, but it is evident that the whole of this district is raised to a considerable height, above its original level; and that the turf bogs were in former days dry and firm land, not subject to inundation from the sea, or to the stagnation of the river waters; else how can we account for timber trees of great dimensions, both oak, fir, and willow, being found at the depth of 15 or 20 feet, standing in the same erect posture in which they grew; and reeds and other palustrine plants, at the same depth and in the same posture. Human bones, furze bushes, and nut trees with nuts, have been found at the same depth. Now it is manifest, that neither furze nor nut trees will grow under water. It appears therefore probable, that the whole of this level was at a former period dry, firm land; and that by some violent convulsion of nature it became of a sudden inundated; this is in some degree confirmed by the extraordinary depth of the clay or sound ground, on the verge of the *Highlands*; and it is well known, that in many parts of this kingdom the sea has gained on the land, and in other parts the land has gained on the sea.

The improvement of such a tract of barren unproductive land, would impart the most pleasing sensations to the mind, and I verily think that two grand drains, accompanied with proper lateral ditches, such as I have now suggested, would increase the rent of this district eight or ten thousand pounds per year.

The profit which has attended the improvement already practised during the last twenty years is, I should think, a sufficient incentive. Scarcely a farmer can now be found who does not possess a considerable landed property, and many whose fathers' lived in idleness and sloth on the precarious support of a few half starved cows, or a few limping geese, are now in affluence, and blessed with every needful species of enjoyment. Disorders of the body, to which the stagnant waters heretofore subjected them, are now scarcely known, and the inhabitants for the most part arrive to a good old age.

SOIL.

The soil of these moors may be comprehended under four divisions:

FIRST,

Strong, dry, and fertile clay of a considerable depth.

SECOND,

Red earth of various depth from one foot to six feet, covering the black moory earth of the heath.

THIRD,

Black moory earth on the surface with a substratum of clay at various depths.

FOURTH, *and* LASTLY,

The turf bog.

The first of these descriptions of land may be considered as of the best quality, being highly productive, and particularly so in a wet summer. If shut up early in the spring it will produce from two to three ton of hay per acre. Its value may be estimated from 2 to 3l. per acre, and it is for the most part devoted to grazing.

It is no less remarkable than true, that this land will fat a sheep nearly as well in the winter as the summer, if not stocked more than one to an acre.

The vast advantage resulting from the inclosure of the waste lands in the parishes before enumerated is so manifest, that whoever runs may read.

A moiety of the manor of Wedmoor might have been purchased about twenty years ago for 20,000l. It is now worth 70001. per annum. The improvements in Huntspile, Mark, Mear, Glastonbury, Eddington, &c. &c. are nearly similar. In the latter hamlet single rights have been sold for more than 800l. and all this without any concomitant inconvenience. At first the scheme was highly unpopular, and its first promoters were on the eve of falling a sacrifice to popular fury and resentment, but by coolness and perseverance they weathered the storm: all parties are now satisfied, and acknowledge the wisdom of the measure. Nor has the advance of the poors rate been in any degree equal to what has been experienced in neighbouring parishes, where no inclosure has taken place, as will be shewn by the following statement.

BRIST

PLAN

ore effectually

the TURF BOGS

and

DED LANDS,

r the Rivers

E and AXE,

he County of

MERSET.

yer Sand, near Wells 1794

EXPLANATION.

The black Lines denote present Rivers and Drains.

The red Lines denote the proposed Amendments.

The Turf Bogs thus

The flooded Lands have a light Shade of Blue.

The Arrows denote the course of Water.

Towns.....as....GLASTON.

Parishes....as...Street.

Villages....as...Sand.

Hill.....thus

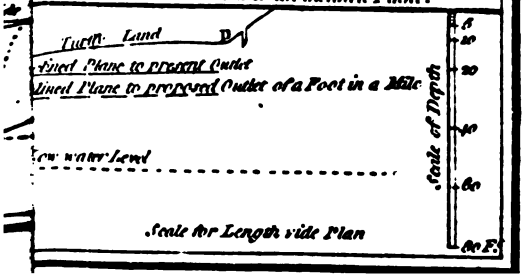
The new Outlet on the Brue, to be 20 Feet under the present, & upon a similar Construction with the new Cut, for draining Kings Sedgemoor.

The new Cutts together with the Old Drains, to be reduced to an inclined Plane, of a Foot in a Mile

Axe

A new Barrier with Sluices, near Hobbs Boat.

A new Cut from Lox Yeo, to White-house, and the River reduced to an inclined Plane.



WEDMOOR.	£.	WEDMOOR.	£.
Amount of poor rate 7 years previous to the inclosure	2132	Amount of poor rate 7 years subsequent to the inclosure	2342
HUNTSPILL.			
Do	1561	Do	2204
MARK.			
Do	1985	Do	2163
MEARE.			
Do	2016	Do	2170

An increased population necessarily accompanying such an occupation of productive land, must inevitably be attended with a proportionate advance in the poor's levy; besides, men cannot, in an instant by any, even the strongest incentives, be roused from a state of sloth to a life of labor and activity. To this may be added that a great part of the extra levy, arises *from the high demand for county stock*; and it is found that for several years past the rates are declining, notwithstanding the poor are treated with much more liberality than heretofore.

The division of property on these lands is effected by ditches 8 feet wide at the top, $3\frac{1}{2}$ feet wide at the bottom, and 5 feet deep, which may be cut in the strongest clay for 20d. per rope, which is something less than $\frac{1}{4}$ per cubic yard; and on the black ground and red earth at 16d. per rope.

At these prices a good workman will, in the summer, earn three shillings per day, and in winter two shillings. Can any excavating machine execute this work at a cheaper rate?

These rhynes discharge their waters into the rivers, and sluices are occasionally made to keep back water in times of drought, for the use of the stock.

The graziers on these strong clays are fond of large inclosures, and object to the planting any trees, or hedges, alledging as a reason, that they harbour flies, which teaze the cattle, and check their progress in fatting; trees also prevent a free circulation of air. Experience confirms the wisdom of this theory. Many also are of opinion, that one piece of forty acres will sooner fat a given quantity of oxen, or sheep, than two pieces of twenty acres each. All however do not agree in this sentiment, and the opponents urge

that animals eat with greater relish, when frequently char one field to another, than when they are confined to one.

As no satisfactory experiments have ever (to my kn been recorded on this subject, let us reason a few thereon.

It is difficult to decide in this case from *experimen* pieces of land, perfectly alike in quality, or two sets exactly similar cannot easily be found; we must theref our opinion from some other data. The argument ma by the advocates for change is, "that of giving the fo cattle *fresh* and *fresh*;" but this seems not to be conclusi pendent of the division fence (which occasions a loss of unfavorable to the small allotments) there must be an eq ber of blades of grass in either case, and the cattle may v feeding as much in one instance as in the other, for in inclosures they will not be seen in the evening where t feeding in the morning. The grand enquiry is, *Do the do they not consume more* grass in one way than the other. they do: and shall not hesitate (though with great diffi give my opinion in favor of a change of food; and thi following reasons:

When an animal is turned into a piece of grass, he tak vey of the whole field, for the purpose, I presume, of that kind of herbage which best pleases his palate.

This perambulation does not much injure the grass, be not very rank indeed (and graziers should be carefu be not so) it will soon rise after the animals tread. He comes contented, and during the time of his abode, fee same manner as he would, were the piece ever so large one or two month's residence in a large piece, the animal disgusted with his situation and tired of his food; the tainted by his breath and by the effluvia of his dung, he for change, and traverses the field, consuming, or rather ing, more grass with his feet than with his mouth.

In ever so large an inclosure (properly stocked) every the field is tainted with the breath of the animal some other in the course of twenty-four hours, and it is as how soon they become disgusted; in changing from fie

it is not so. Every fortnight or three weeks brings a supply of untainted food, which gratifies their palate, and a change of scene amuses them and increases their comfort and enjoyment.

The only manure ever put on these lands is the contents of the drains and ditches, and this, with judicious management in the method of grazing, is sufficient to keep them in unabating fertility.

Some of this clay land, when tilled, has been known to produce ten or twelve successive crops of wheat, without an intervening fallow or fallow crop. I was shewn a field in the parish of Mark, which had growing in it the nineteenth crop of wheat, and I verily think the produce will not be less than fifty Winchester bushels per acre. No manure had been put on it during the whole time, save the contents arising from the cleansing of the ditches. The stubble was mown every year and carried off, two ploughings only were given it, after which the wheat was sown in the months of November or December, under furrow in eight furrow ridges, after the rate of $2\frac{1}{2}$ bushels per acre, chopping the clods and smoothing the surface of the ridge with a spade.

The average produce per year for the whole eighteen years was estimated to exceed thirty-five bushels per acre.

This astonishing fertility of soil can only be aſcribed to the invigorating principles of the saline particles with which the land is impregnated. They enable it to produce a succession of crops, which in common land would reduce the soil to a mere *caput mortuum*.

Notwithstanding this encouragement to tillage, the plough lies idle, and nineteen parts out of twenty remain in grass; though it is apparent that the value of the land in fee may be gained in a few years.

GRAZING MANAGEMENT.

THERE are two methods of fatting oxen, the one called summer, and the other winter fatting; the first is thought the most profitable and accompanied with the least riſque.

In the first method. They are purchased in February, and are for the most part of the Devon sort, bred in the lower part of So-

mersetshire. They are bought in good condition, and cost 8l. to 15l. each; during the interval between February and time they consume each about 10 cwt. or 12 cwt. of *inferior* (viz.) the skimming of their summer leaze. When at gras are allowed fr m one acre to one acre and a half each ox, and add one sheep to each ox. Horses, if any, are kept ver ringly, not at any rate to exceed one to twenty acres of g ground. These oxen will be fat some before and some soo Michaelmas, paying for their keep from 3s. 6d. to 4s. per Frequent bleeding in small quantities, is found to accelerat fatting.

The next stock are bought in June, July, and August, a not of so good a sort, being either home bred or Welsh, an from 6l. to 8l. These follow the stock purchased in Feb and are sometimes stall fed in the winter, and sometimes fat the field; in either case they have the best hay and good dance.

They are fat in April and May, and sell from 12l. t each.

A grazier occupying 200 acres of the best land may fat 100 head of oxen, to which add 270 sheep and 10 colts, tating altogether a profit comfortable, but by no means *taut.*

The accompt may be thus stated:

GRAZING.

Dr.	£.			*Cr.*	£.		
To rent of 200 acres, average value, 40s	400	0	0				
To tythe and taxes, say	50	0	0	*Oct.* By 50 oxen at 18l.	900	0	0
Feb. To 50 oxen at 11l.	550	0	0	*May* By 50 oxen at 13l.	650	0	0
July To 50 oxen at 7l.	350	0	0	By profit on 70 sheep, summer kept	40	0	0
To mowing and making 50 acres of hay, at 10s.	25	0	0	By profit on 10 colts	40	0	0
To skimming and making 50 acres of summer leaze, at 3s.	7	10	0	By profit on 200 sheep, winter fatted, and sold in April unshorn	100	0	0
To wages throughout the year, besides the farmers labor	50	0	0				
To accidents	20	0	0				
	1452	10	0				
To profit interest of capital included	277	10	0				
	1730	0	0		1730	0	0

The oxen when fat are driven to the London, the Salisbury, and the Bristol markets, at the following expences (salesman's commission included.)

London, 12s. per head
Sarum, 5s. ditto
Bristol, 3s. ditto

The

They are nine days travelling to London, a distance
miles. It is difficult to say which may be considered as
market; but the general opinion seems to be, that the
market is calculated for those only who attend it regular
week, the price of beef per ſtone greatly varying accordi
plenty or scarcity in the market.

Some farmers graze heifers, in preference to oxen, buy
in about the months of March and April, and selling in
and November. The profit amounts to 40s. or 50s.
their summer food, and the land is stocked after the ra
heifer to each acre, together with a considerable number
both in summer and winter, and it is thought by many
method of occupation is more profitable than the former.

Others fat two year old wedders of the Dorsetshire and
setshire breed. The Dorset sort are purchased about Mi
at Sherborne and Stolford Fairs, price from 20s. to 30s.
is given in the winter unless the weather be uncommonly s
the ground covered with snow. They are sold fat betw
bruary and May, and weigh from 20 to 30lbs. per qua
few oxen accompany the sheep, which are bought in t
and fatted the ensuing winter. It is the universal opin
sheep are not so profitable stock as oxen.

It is no unusual thing for some of the graziers to g
prime oxen a second summer's grass. In this case they ar
to a high state of perfection, and in all probability they
the *second* year than the *first*, for it is well known that a
nearly fat will consume much less food than a poor one.

Ewes and lambs are also the stock of some farmers;
purchased partly in the autumn in lamb, and partly in t
with the lambs by their sides, and are mostly of the D
or Mendip breed.

All the graziers of this county are partial to the red
Somerset and Devon, and you seldom see a North coun
their possession. They will not allow that the north
possess any comparative merit either for labor or slaugh
haps some allowance should be made for long establish
dices, but it must be admitted that in the London ma
which fat oxen are brought from all parts of the king

Somersetshire, (next to the Galloway Scot fatted in Norfolk and Suffolk) appear to bear the belle both in respect to firmness of grain and internal fatneſs; and there cannot be a stronger proof of their merit, than the increasing demand for them with the most eminent graziers of Leicestershire, Oxfordshire, Warwickshire, &c. many of whom regularly attend the fairs both of Devon and Somerset, as purchasers of them lean; and I have been credibly informed they find a good account in so doing. As to myself, it is with reluctance that I hazard an opinion on this subject; respecting which men of long established experience are so much divided, and on which such various opinions exist. But I cannot help remarking, that if the superiority of the northern sort were so conspicuous as the great breeders of the North affirm, how is it that some of their best friends and most strenuous supporters in the *sheep line* desert them here, and give an unqualified preference to the western breed. It is not likely that a wary and considerate farmer would travel 150 or 200 miles to purchase stock, with all the manifold inconveniencies and risque which must attend the driving so far, if he could purchase equally cheap and good at home.

Nothing is more censurable than an injudicious partiality, and this principle oft times leads men hastily to run away with ideas unsupported by fact; but when long experience and frequent trial have produced conviction, a farmer would be equally inexcusable, were he to resist the influence naturally produced in his mind thereby.

The red breed of Devon and Somerset have been progressively increasing, and they are now partially diſpersed over great part of the kingdom, and in respect to their qualities as a *laboring* animal, I never heard but one opinion, and that opinion I can myself confirm from large and long experience, namely, that they are *the best in the kingdom*. In respect to their qualities as a *fatting* animal, I will not speak so decidedly, for I verily believe they have many rivals; the French, the Galloway Scot, the Leicester and Oxfordshire, the Herefordshire, the Glamorganshire, the Suffolk polled, are all good grazing cattle; and in almost every county may be found in the hands of the most spirited and attentive farmers, a valuable sort highly superior to the general run of the county; and I must again repeat, that the safest plan which a farmer can adopt,

is that of improving his breed by a judicious selection of his best females, and by procuring such males as are eminently distinguished for perfection in those points wherein his may be found deficient. A total change of stock is frequently accompanied with loss and disappointment, and if the attempt succeed you are for a considerable time driven to the necessity of fatting all you breed; for the rooted prejudice of graziers in favor of the prevailing sort of the county, whatever they may be, cannot easily be overcome; and you may in vain expect at market a price adequate to your care and exertion.

Notwithstanding what has been said, there are certain well-founded axioms in the grazing system relating to the shape of the animal, which cannot justly be disputed. Delicacy in the horn, head, and neck; deepness and roundness of the carcase, wideness of the loins, small bones accompanied with a thin skin: these, with many other points which might be enumerated, are considered as essentials, and are seldom unaccompanied with an aptitude to fat.

The same partiality which I have here stated to exist among the Marsh farmers in favor of the red oxen, was a few years since as strongly manifested in favor of the Dorsetshire sheep; but of late the polled breed of the lower part of the county gain ground, and are in high esteem.

These sheep are bred in the neighbourhood of Dulverton, Bampton, Wiveliscombe, &c. they are well made, yield a large shear of wool, and fat quickly; but they might in my opinion be greatly improved by a cross with the new Leicester, to which they have in size and shape some degree of affinity. The objection made by the breeders in that district to a cross with Leicester is, that what they might gain *externally*, they should lose *internally*; and that the deficiency in the fat of the inside would so disgrace their sheep in the eye of the butcher, that they would lose their old customers. Surely this reasoning is fallacious; for on a supposition that the inside fat of a sheep were by this intermixture to be reduced 6lb. per sheep, (and I think this as much as it possibly could be) the deficiency at 4d. per pound would amount to only two shillings; five pounds extra weight of the carcase would pay this, and if the buyer were to allow the butcher for this defect,

all reasonable objection on his part is done away, and on the other hand the grazier need not be alarmed, for he may rest assured, that the increase of the carcase will amply repay the want of inside fat.

DAIRY MANAGEMENT.

THE cows of this district being intended chiefly for the purposes of cheese making, the profit arising is in proportion to the quantity and quality of the milk; size therefore is not attended to, but principal regard is paid to the breed whence she sprung. The dairy men think it more profitable to have a small breed *well fed*, than the best breed in the world *starved*; and the cow that gives milk the longest is most esteemed *. The time of calving is from the beginning of February to Lady Day, and they take great care to keep their cows well three weeks or a month before they calve; the milk will rise in proportion to the goodness of their keeping; very little attention is paid to the nature or sort of the bull. The calves (those few excepted which are reared to keep up the stock) seldom live a month, and cheese making begins in March, from which time it continues till December.

The calves which are reared are fed principally with cheese whey, and in May they are turned to grass and left to shift for themselves; some careful dairy women have tried to increase their growth, by giving them whey after they are put to grass, but this plan is reprobated as doing more harm than good. When they become yearlings they are subject to a disorder provincially called the Quarter Ail, which is a mortification beginning at the hock, and proceeding with astonishing rapidity to the vital parts, occa-

* The cheese of this district is much admired, particularly that made in the parishes of Mear and Cheddar.

It is for the most part purchased by Jobbers, and sent through the medium of Weyhill, Gileshill, Reading, and other fairs, to the London market, where it is sold under the name of *double Gloster*.

The method of making has been so often described, that I shall not trouble my readers with a minute detail thereof, and shall only add, that cleanliness, sweet rennet, and attention to breaking the curd, are the principal requisites in cheese making.

sioning death in a very few hours. The first sympton
and no cure has yet been found; the quarter affected
tirely putrid whilst the other quarters are in a sound s

This disorder is, I think, the same with that know
under the name of Gargut; nor is it confined to th
but is, I believe, generally known; and an investig
cause of the disorder, which might lead to the discov
is well worthy the attention of all agricultural bodie
subject to a disorder called the Yellows, something
Jaundice in the human species. This disorder freq
the udder, and br'ngs on a false quarter, that is, a d
milk in one teat, accompanied with a swelling and
For this, however, I can suggest a remedy which seld
flour of mustard mixed with any liquid, two ounces
repeating the same two or three times in the course o

The heifers are put to the bull in July, when they
year and half old; and the prevailing opinion seems to
which are kept from the bull a year longer do not
milkers. The average produce of a dairy per day may
at about three gallons per cow, from Lady Day to
and from Michaelmas to Christmas one gallon per cow

Cows are kept till they are fourteen or fifteen y
when fatted they seldom get to a higher price than s
pounds.

A dairy maid can manage twenty cows so far as
in-door work, and the gross produce of a dairy freque
12l. per cow, and in some particular instances 14l.
only be done when cheese is at the present enormous
6d. per lb. twelve months old, and fat hogs at $4\frac{1}{2}$d.

The following estimate of the expences and produ
supposing the land and the cows to be of the first qu
trust, be considered as tolerably accurate.

DAIRY TWENTY COWS.

Dr. Cr.

	£.	s.	d.		£.	s.	d.
To two milkers 40 weeks, at 3s. per week . .	6	0	0				
To a man's labor, winter serving cattle, changing their pasture, selling cheese, &c. &c. &c.	4	0	0				
To dairy woman, 4s. 6d. per week	11	14	0				
To dairy utensils, candles, salt, brushes, mops, and all other articles . . .	4	6	0	By 90 cwt. of cheese at 45s. . . .	202	10	0
To Arnotto . .	1	0	0	By calves . .	15	0	0
				By butter . .	10	0	0
				By hogs . .	25	0	0
3. A larger dairy might be kept for 25s. per cow .	27	0	0				
To rent 30 acres, summer pasture, 40s.	60	0	0				
To skimming the same, and making six ton of hay .	3	0	0				
To rent of 15 acres mown ground, 40s.	30	0	0				
To making the hay, say 30 ton, at 12s. per acre	9	0	0				
To tythe taxes, &c. say . .	10	0	0				
	139	0	0				
To profit, interest of money, and the decreasing value of cows included	113	10	0				
	252	10	0		252	10	0

On a comparison of this with the grazing account, it i
that the dairy occupation is more profitable than grazir
former amounts to 50s. per acre, whereas the latter is
per acre. On account of population the dairy system ou
be preferred, as one grazing farm of 200 acres would aff
fortable livelihood to four dairy families.

I am aware, that should these observations induce an
dairies, and consequently a more liberal supply of che
declension in the price of that article might take place,
bring all things again on a level, and advance the graz
to an equality with that of the dairy man.

Be this as it may, I think dairies should be encourage
arduous domestic labor and incessant employment which
on the female part of a farmer's family, will always pre
due increase thereof, unless their profits on a comparis
great indeed. But whilst I thus recommend encouragen
pail, I must do it with this proviso, that a different m
nagement be adopted from that now practised.

The cows of this district are almost universally de
the fields both summer and winter; in consequence of
dung produced even by a large dairy is trifling inde
arises a manifest declension in the fertility of the lan
may distinguish a grazing from a dairy farm at a grea
In this exhausted state the dairy land must remain, unl
rent system of management be successfully inculcated.
suggest a plan of improvement it would be the followi
dairy farms be accompanied with a due proportion
perhaps *a fourth part*; let proper stalls and bartons be
residence for the cows during the winter months; le
turnips and potatoes be grown for their winter subsis
above all, let them be well littered and kept perfectly
these means a large supply of dung may be procured at
pence; and if the farmer wish to increase the quantit
only dig up the waste earth on the borders of the hig
make a layer therewith in his bartons; this will absorb
and when mixed and incorporated with the dung, will
manure highly fertilising. It cannot be sufficiently reg
this practice should be so seldom adopted, for repea

ments have taught, that 100 acres of land thus managed, will keep more cows than 150 acres under the present system. *Artificial* grasses will enable the dairy man to turn his cows out a month or five weeks earlier than he was accustomed to do on *natural* grass and turnips, &c. will supply them with winter provender; so that the consumption of hay will be greatly reduced, and more land may be devoted to summer pasture. It may be here objected, that the quality of the cheese and butter may be injured; of this I have my doubts. Artificial grass in the months of March and April, will make as good cheese or butter as natural grass; after this the cows should be put to the natural pasture, and the former shut up for mowing.

As to the effect of turnips and cabbages, I will obviate every difficulty by stating a simple recipe, whereby all disagreeable flavor may be intirely prevented, in the making of butter, and as to cheese, there is but little made at that season; and if there were, the palate must be nice indeed which could distinguish a difference of flavor.

RECIPE.

When the milk is set abroad in the leads, put one gallon of boiling water to six gallons of milk. It may also be prevented by dissolving nitre in spring water, and putting about a quarter of a pint to ten or twelve gallons of milk when warm from the cow.

The second description of soil found in this district, namely, a strong red earth over a pure clay, possesses also many good qualities; it is neither subject to injury from an excess of wet weather, nor does it burn in a drought. This soil, formed by a deposit washed from the hills, may be considered as a fine vegetable mould, and if tilled, is capable of bearing a variety of crops in the highest perfection. Its value is about 40s. per acre, and its produce of hay about two ton.

Black moory earth is the third sort of soil found in this level, and on it extraordinary improvements have been effected, by covering the surface with a thick coat either of clay or red earth. In its natural state it is in a great measure unproductive, yielding scarcely any herbage, save carnation grass, rushes, and other aquatic plants. The deficiency of this soil arises from the want of tena-

city; the best means of improvement, is *compleat draining*, that a liberal co·ering with clay or red earth; these will corporate with the soil, and make it sufficiently firm. A improvement, no kind of land is more productive, parti a dry summer.

I have this year seen land of this description, spring fe 12th of May, yield by the 24th of June two ton of acre; and Mr. Lax, on his farm at Godney, has for past kept twenty cows and a bull throughout the year o five acres of land. His plan is to winter * *hayne* fifte This on an average of seasons is fit to be stocked the beg April, and is fed till the 12th of May. By this time th ing twenty acres are in sufficient strength to take the c will keep them till the after grass of his mown ground receive them; then the unfed grass in the summer leaze which yields from 5 cwt. to 10 cwt. of hay per acre; thi to the cows when they are dry, namely, in the months o ber and January. After they have calved, which is fro ginning of February to Lady Day, they are supplied wit hay; here are more than thirty tons of hay produce twenty cows cannot possibly want winter provender.

Not many years since this farm was part of an exten inclosed by Act of Parliament, and was purchased by M the commissioners at 15l. per acre, to which add 5l. for draining and claying, making in the whole 20l. pe 5 per cent. the rent will be 20s. per acre.

* It is *old* English, and found in all books and laws relating

Dr.	£.	s.	d.	*Cr.*	£.	s.	d.
To rent of 35 acres, at 20s.	35	0	0				
To taxes, highways, &c.	1	5	0				
To dairy women, and all other incidental expences, 25s. per cow	25	0	0	By 60 cwt. cheese, at 2l. 10s. . . .	150	0	0
To expences, making 15 acres of hay, at 12s.	9	0	0	By 20 calves . . .	15	0	0
To expences, skimming and making summer leaze hay . .	3	0	0	By butter	15	0	0
To fences . . .	1	15	0	By hogs	20	0	0
To interest of capital	7	10	0				
	82	10	0				
Profit	117	10	0				
£	200	0	0		200	0	0

Though the produce of cheese in comparison with the general produce of the country is small, it must not be supposed that the deficiency arose from any want of food, but principally from the cows being young and of a small breed.

The last species of soil is the turf bog. The surface of this soil is of a light, spongy, tough texture, full of the fibrous roots of plants, and withal so matted together, that a spade or knife must be made very keen to penetrate it. Immediately under the turf or sward is found a vein of black moory sand, so unlike in its nature to the peat which lies underneath, that when cut with it and dried, it will fall off and separate from it. This mould is of good quality, and will bear both natural and artificial grass in great abundance. It is also an excellent manure for clay or any other heavy land; this black moory stratum is from one to two feet in thickness, and underneath is found the peat, which is from three to fifteen feet in

Under the peat is a bed either of clay or sand; the peat is full of flaggy leaves, and hollow stalks of rushes. These vegetable matters are accompanied with a substance like pitch, of a bituminous nature, which lies between the stalks of the rushes, and the leafy remains, and constitutes the inflammable part thereof. It is used as the common fuel of the country, and makes a clean and pleasant fire, particularly well adapted to the purposes of the dairy. An acre of land will furnish an immense quantity, insomuch that in the parish of Catcott it has been sold for a term of twenty-one years as high as thirty pounds.

There is no great difficulty in the mode of curing peat. In the months of May and June it is cut out with a keen instrument into the shape of bricks, left single on the ground for a few days to dry, by which time they lose part of their moisture, and become firm enough for piling in pyramidal heaps of about a waggon load each: in this state they are compleatly dried, and then sell for 10s. per waggon load on the land where they are dug, and the price of digging and carrying is five shillings per load. Though the outer covering or sward of this boggy land will burn, yet it is not much esteemed as fuel, being soon consumed.

Before I suggest a method of improving these bogs, let us advert to the probable cause of their present sterility. I conceive then that stagnant water is the grand operative principle which has for ages kept the superstratum buoyant, and swimming as it were, on its surface; this lifts up, and swells the soil, making it shake, and give way on treading. In confirmation of this idea it is found, that at the depth of four or five feet the black earth becomes a mere pulp, in which an iron rod will descend with a trifling exertion to the depth of the clay, and it invariably happens, that the worse the bog the deeper the clay.

In the third description of land stated at the beginning of this disquisition, the clay is found at the depth of three, four, or five feet, and gradually sinks thence to the lowest part of the peat bog, where it is found at the depth of eighteen or twenty feet. If therefore the surface of the two sorts of land be equal, one foot of stagnant water on the clay of the former will be accompanied with fourteen or fifteen feet on the clay of the latter. Such a body of water continually remaining at all seasons of the year (for in the

dryest summer I conceive its diminution does not exceed three or four feet) cannot fail of rendering the surface cold and unproductive. Agreeably to this theory the surface must rise in the winter, and subside in the summer months; and this is verified by fact, for certain fixed bodies are seen over the moor, at certain seasons, which cannot be descried at others.

If these premises be admitted, it follows, that the only radical cure must be compleat draining, and after that burning the matted surface; the former I think may be effected in the manner before stated, and the latter in the following way, without any great difficulty or expence.

In the months of March or April when the land is dry, let it be ploughed as deep as six strong horses can plough it; this will cost about twenty shillings per acre. In this state let it remain till the sod is dry enough to burn, then provide yourself with some keen cutting knives of about a foot in breadth, the cutting part of which should be of a semicircular form; with these let the plit be cut into parts of about two feet and a half in length, then let your burners reduce them to ashes as fast as possible, which being spread equally on the surface and ploughed in, sow the ground about the middle of May with one bushel and a half of buck wheat per acre, two bushels of ray grass, and five pounds of white Dutch clover. The cost of all this will be nearly as follows per acre.

	£.	s.	d.
First ploughing	1	0	0
Cutting the plit and burning	0	12	0
Spreading the ashes	0	3	0
Second ploughing	0	5	0
Harrowing	0	1	0
1½ Bushel buck wheat	0	6	0
2 Bushels of ray grass	0	5	0
5 lb. of Dutch clover	0	4	0
Tythe	0	3	0
	£.	2	19	0

Should the subsequent summer be moist, it is probable that the produce of buck wheat might be equal in value to the expenditure; but should it even entirely fail, the artificial grass will amply repay the expence and exertion of the husbandman.

After the buck wheat is harvested, let lateral trenches be cut at the distance of thirty-five feet, emptying themselves into the great drains; these trenches should be twelve inches wide, and sixteen inches deep, and will cost about one penny per rope (twenty feet) or about five shillings per acre. The contents of these trenches being for the most part black mould, will be excellent manure for the artificial grass, and should be spread thereon without delay. It might be adviseable for the first year or two, either to mow or feed with sheep, avoiding the tread of heavy cattle till the land has fully subsided, and if clay or red earth could be procured within a moderate distance, give it an occasional sprinkling therewith, after the rate of thirty or forty cart load per acre.

I have not the least doubt but with this management, or with something similar thereunto, the turf bogs might be all reclaimed, and made worth twenty-five or thirty shillings per acre. And as a proof thereof, I need only instance the vast improvements already made, and still carrying on wish unremitting assiduity by Mr. Moxham of Glastonbury, whose exertions in this way highly merit the warmest encomiums.

Without the assistance of the plough he has by draining and earthing, advanced land of the foregoing description from one shilling per acre to thirty shillings. His expences it must be allowed are great, for he puts one hundred cart load, nay, in some instances, one hundred and fifty cart load of red earth per acre, which being halled one and a half or two miles, the cost must be more than ten pounds per acre; yet notwithstanding this bountiful and expensive manuring, the advance in the value of the land amply compensates; for the present price of these bogs is two pounds per acre *in fee*, and many hundred acres may now be bought at that rate.

Mr. Moxham contends, that a covering of red earth, such as he bestows, is absolutely necessary to kill the old sward; and it must be admitted, that the end proposed is effectually obtained, but then

the

the land is for some time unproductive, and the expence is also so enormous, that few farmers would have courage to go through so costly an experiment.

How far the plan of proceeding which I have before suggested is, or is not more eligible, I shall leave to Mr. Moxham and to my readers to determine.

Mr. Moxham has planted firs and alder hedges on these bogs with great success, and has made various striking improvements to the great astonishment of his neighbours, who could not conceive such things possible. In short, he is justly entitled to the thanks not only of the laboring poor, but also to those of the community, for his persevering industry and activity.

No country can afford greater encouragement either to the grazing, dairy, or corn farmer, than this; the salubrity and mildness of the climate, and the fertility and strength of the soil, enable the occupier to devote his land to either purpose with an almost certainty of success; and the annual profit over and above his rent cannot fail as a source of wealth and independence. The dairy farms are small, seldom exceeding two hundred pounds per year; the grazing farms are large and very detached.

It is obvious, that the profits of the dairy exceed those of the grazier nearly in the proportion of two to one, and as one hundred pounds per year will afford a comfortable subsistence to a family, small farms are best calculated to increase population, and to rear up an industrious race of independent yeomanry. Excepting the bishop of Bath and Wells, there are few proprietors who stand seized of more than six or eight hundred pounds per annum, and for the most part from one hundred to two hundred pounds per annum, and more than nine-tenths of the land are employed in pasture. The old arable was found not to pay for ploughing, and has therefore been laid down.

Some few farmers however have enriched themselves by giving four pounds per acre for some rich dry and newly inclosed land, on which they have grown fifty bushels of wheat per acre for ten years successively, without fallow or manure of any kind.

Where there is so much to approve, I am sorry there is any thing to condemn, but truth compels me to state, that a shameful inattention prevails as to their breed of cattle, and scarcely can an instance be produced of a farmer's giving more than ten pounds for

a bull, or three pounds for a ram; yet notwithstanding thi
neglect, many are accustomed to sell their home bred tea
oxen, when fat, for one hundred pounds; and sheep in gr
dance, that weigh from twenty to thirty pounds per quart
elevated corn lands were formerly in open common fields, l
effort has been made to divide and inclose them; the ten
ever (great part being under the see of Wells, and other
under charity endowments, and under queen Anne's bo
operated as a check to the necessary exchanges. None
common field lands will let for more than fifteen shillings
whereas if inclosed they would let for twenty-five shillings
Course of crops. 1. Fallow. 2. Wheat. 3. Beans or

PRICE OF LABOR.

In the summer season, one shilling per day, with meat a
in the winter, one shilling and two-pence per day, with
of cyder. Labourers at task work will earn from two
shillings per day.

PARING AND BURNING UNKNOWN.

Price of provisions something less than in the north eas
of the county.

The low lands are badly wooded, and planting in gener
fully neglected, particularly a very profitable part of it,
elm and the willow, both of which thrive in this soil, an
ter is much wanted for the purposes of the fishermen.

The turnpike roads are nearly in a state of perfection,
travellers passing from Cross to Bridgwater will ackn
The parochial in a state of improvement, but much mus
done to render a journey through this country comfo
pleasing.

The *old* farm houses are ill constructed and improperly
but the *new* ones are much improved in point of uniformit
larity, and convenience.

The rack rent leases are generally for seven years, and
nants confine the quantity of land in actual tillage; the n
crops, the mode of seeding, to spend the produce on the
to sell no hay, not to plough the meadow or pasture land
relet without consent, and for want of assets to re-enter.

Though there are many things in the practices of this district deserving both commendation and imitation, I cannot help obſerving, that the process of making hay is not among the number.

In this respect they are the most egregious slovens I ever beheld. It is no unusual thing to see cocks of about a load each remain in the fields two months after they are made, and before the rivers were lowered and the country drained, these cocks were frequently carried away by a sudden flood. When conveyed to a large mow, no care is taken either in making or securing it; it is seldom thatched; some indeed make their mows in a conical form, by which means they suffer but little injury, but for the most part they are left flat on the top, and the winter rains soak from the top to the bottom, without shame or regret on the part of the owner. In their summer pastures they are equally slothful; docks, thistles, nettles, and other weeds cover nearly a quarter of the land, and wafted by winds, the seed is disseminated on the lands of their more careful neighbours. Oftimes have I observed, that where nature is most bountiful, her gifts are least prized. This is the case with the farmers here; so quick is vegetation even in the winter season, that the cattle (unless it be unusually severe) scarce ever want a a bite of grass, and a deficiency of winter provender is scarcely known. I presume it is on the same principle that the Scotch gardeners excel the English; having more difficulties to encounter, their exertions and care are proportionate thereto.

Before I take my leave of this rich clay soil, it may not be amiss to say something of their orchards, to the production of which this land is peculiarly adapted. Permit me therefore to state, by way of encouragement to planting, that there is scarcely an orchard in this district that will not let for four or five pounds per acre, and if the trees were planted at proper distances, *viz.* sixty feet every way, the pasture suffers but little injury; the strength of the soil enables the trees to throw forth a multitude of roots sideways, near the surface; it is therefore of the utmost importance that they should be placed at proper distances. In confirmation of this idea, a tree thus placed in an orchard belonging to Mr. Batt, of Mark, has in many years produced four hogsheads of cyder, and the tenant told me, that he would give for it one guinea per year, for a term of twenty-one years. The tree is not more than forty years

old: most orchards are planted too close. The desire o
great deal of fruit upon a little ground is the cause of
but the method defeats the purpose. When an orcha
planted, sixty feet appear an immense distance, and I ha
many, who acknowledge the advantage of distance, feel
mit so great a vacancy, and have planted at thirty feet,
resolution of rooting up every other tree at fifteen or tw
old; but alas! this is scarcely practicable; after a tree
to full bearing, an insurmountable reluctance to eradicate
which arguments, however powerful, cannot overcome.

The sorts of apple in best estimation are, Royal Wildi
Styre, Redstreak, Court of Week Pippin, Pounset or
Flood Hatch, Black Pit Grab, Buckland, Mediate or S
Royal Jersey, Woodcock, Red Hedge Pip, Old Jersey,
streak. They are grafted on crab stocks in the nursery,
gross growing fruit.

As soon as the ground for the orchard is ready, plant
and be particularly careful not to plant them deep in th
After about four years, lop their heads and graft then
fruit you most esteem, taking care to adapt your gra
stock. In other words, let your grafts, and the trees
heads you graft, be as similar in respect to luxuriancy as
on this a great deal depends. It is found, that a luxur
growing graft will never succeed on a slow growing sto
"*vice versa.*" It may also be observed, that some exce
of fruit are naturally so slow of growth, that a man
planting for himself, plants for his grand-children; and
deavour to force them (which is often injudiciously done)
uriant stocks, you occasion disease. The trees neve
large or lasting, and the fruit will be tasteless and insipid

Great care should be taken to secure the trees whil
from the nabbing and rubbing of cattle, and more especia
but in this respect the planters in this country are not v
tive, nor is there any thing worth notice in their mana
the fruit.

The average price of the article is about thirty shi
hogshead.

THE SOUTH MARSH

IS bounded on the North East, by Polden Hills, on the South West, by the river Parrett, on the North West, by Bridgwater Bay, and on the South East, by Ham Hill, &c.

That part thereof which lies nearest the sea, is higher than the interior part, owing to the great deposit of sea mud left at the high spring tides, for ages past; and it is also better drained, in consequence of being near the outlet, where the greatest fall of draining exists. (This observation also extends to the lands of Brent Marsh.)

The river Parrett is the principal drain of this marsh. It has no *barrier*, and the tide flows up as far as Langport, filling its banks, and frequently penning the land floods over the moor, and meadows adjoining; so that near thirty thousand acres of fine land are frequently overflown, for a considerable time together; rendering the herbage unwholsome for the cattle, and the air unhealthy to the inhabitants. An Act of Parliament was lately obtained for draining a considerable part of this fenny plain, called *King Sedgmoor*, which together with the adjoining inclosed meadows now flooded, amount to about twenty thousand acres. This desirable end is nearly accomplished, by having the outlet or sluice many miles lower, in the river Parrett, than formerly. Nothing could be more unpopular, at its outset, than this undertaking, and every obstacle, which prejudice and ignorance could suggest, the promoters thereof had to encounter.

About the year 1680 King James laid claim to the soil of this moor, and formed the design of improving it by a compleat drainage; but so perverse were the owners of the adjacent lordships commoning with their cattle on it, that they opposed the scheme with all their might; and discerning that they could make no justifiable claim to the soil, offered to assign to the king four thousand acres, in lieu of his right thereto; and to lay out the residue, being nine thousand five hundred and twenty-two acres amongst their lordships; which being accepted of by the king, there were allotments then made to each manor according to the following proportions:

Names of Manors.	
Dunwear . .	To the heirs of Sir Robert Chicheste
Stawell . .	To Sir John Stawel . . . . .
Sutton Mallet .	To John Mallett, Esq. . . . .
Bawdrippe .	To Walter Long, Esq. . . . .
Brodney . . .	To Thomas Muttlebury, Esq. . .
Middlezoy . .	To R. Warr, Esq. Sir R. Strode, &
Moorlynch . .	To heirs of Mr. Floyer . . . .
Highham . .	To Henry, Lord Gray . . . .
Nether-ham .	To heirs of Sir Ed. Hext . . .
Beere . . .	To Sir William Courtney, &c. .
Aishcott . .	To Sir Thomas Cheeke . . . .
Horsey . . .	To Sir George Horsey . . . .
Ched-zoy . .	To Earl Pembroke . . . . .
Weston . . .	To Sir Peter Van Lore, &c. . .
Othery . . .	To Sir Edward Trent, &c. . .
Somerton . .	To Thomas Hill, Esq. James Rise E
	Burggesses, &c. . . . .
Graynton . .	To the heirs of Mr. Watts . . .
Pitteney . .	To Earl Northampton, and Sir J. Ha
Compton Dunden	To Sir J. Strangway, and Baronet P
Walton . . .	To Sir Thomas Thynne . . .
Street . . .	To Andrew Whittington, &c.* .

Total acres .
Besides for the

Memorandum. That these allotments were rated pro after the rate of two hundred and eighty-two acres (by the perch of fifteen feet) to every hundred a severals.

In the reign of *King William*, a similar attempt was act was obtained for draining it, but by some means operation was entirely frustrated, This projected and provement lay dormant till the year 1775, when it was *Mr. Allen*, then member of Parliament for Bridgwate

* Dugdale.

of success, and highly impressed with the idea of its importance, he purchased a large number of rights, and having obtained a signature of consents, went to Parliament; but not having interest enough in the House, to stem the torrent of opposition, all his delusive prospects of profit vanished, and he found himself left in a small, but respectable minority. Though Mr. Allen met with so warm an opposition, yet there were not wanting many Lords of Manors interested, who expressed their decided approbation of the measure, in a *general point of view*, but objected to the mode, by which it was conducted, and to the men who were the ostensible movers in the business. After this defeat, nothing was done till the year 1788, when a meeting was held at Wells to take into consideration the propriety of draining the said moor, and dividing it into *parochial allotments*. At this meeting Sir Philip Hales presided; and after much abuse and opposition, from the lower order of commoners, who openly threatened destruction to those who supported such a measure; the meeting was dissolved, without coming to any final determination.

The leading idea was however afterwards pursued with great assiduity by Sir Philip, and his agent Mr. Symes of Stowey; and by their persevering industry, and good management, matters were brought into such a train, that application was made to Parliament in the session of 1790, for leave to bring in a bill for draining and dividing the said moor into parochial allotments, among thirty parishes and hamlets therein stated; and also among such other parishes, as may prove a right to feeding the same. In the spring of 1791 this bill passed into a law; and the commissioners, acting under the powers thereof, held their first meeting at Bridgwater, in June 1791.

I have been thus particular in stating the progress of this business, merely to shew the impropriety of calling public meetings, with a view of gaining signatures of consent; or taking the sense of the proprietors in that way. At all public meetings of this nature which I ever attended, noise and clamor have silenced sound sense and argument. A party generally attends with a professed design to oppose, and truth and propriety have a host of foes to combat.

Whoever therefore has an object of this kind in view, let him acquire consents by *private application*; for I have frequently seen the good effects thereof manifested, by the irresistible influence of truth, when coolly and quietly administered; and it has frequently happened, that men hostile to your scheme, have, by dispassionate argument, not only changed their sentiment, but become warm partizans in that cause, which at first they meant to oppose.

This never could have been done at a public meeting: for after men have once joined the band of opposition, their pride will not permit them to retreat.

How far the commissioners appointed under this act have discharged their trust, time will shew; but the general opinion of their conduct seems to be flattering; and those who at first supposed that the act carried with it the seeds of its own dissolution, are brought to confess, that the present appearances are promising.

It cannot but be supposed, that in the investigation of four thousand and sixty-three claims, (of which only one thousand seven hundred and ninety-six are allowed) and in making compensation for a large portion of land, necessarily cut through, in making the great drain, many causes of offence must be given; but I trust neither partiality, negligence, nor corruption, can be imputed to them; and if they have erred, it has been an error of the head, and not of the heart.

Previous to the present drainage, this moor emptied itself into the river Parrett, some miles above Bridgwater, and the fall from the moor was very trifling. Hence it followed, that the least flood covered it with water, and in that state it frequently remained many months. It was at first suggested by many people, whose abilities the county held in high estimation, that nothing more was necessary for the purpose of draining the moor, than the opening and widening these old outlets; but it occurred to the commissioners, that such a partial, and ineffectual mode of procedure, could not produce a radical cure. They therefore set themselves about to discover a convenient place of discharge lower down in the river, by which a greater and more rapid descent might be gained.

An old sluice called Dunbald Clize presented itself as the desired spot; and on levels being taken by Mr. White, an eminent surveyor,

surveyor, it appeared that an extraordinary fall of nearly ten feet could be acquired; and that the descent from the upper part of the moor to this outlet, (a distance of about twelve miles) was nineteen feet, or about one foot and a half in a mile. The only objection which could be brought to the measure, arose from a consideration of the great expences, which must be incurred, by cutting through two miles and a half of elevated land.

No alternative however presented itself. It appeared that this plan must be adopted, or the work would be incomplete. Justified therefore by the concurrent opinion of Mr. White, and of Mr. Jessop, (whose advice was taken) they proceeded boldly; and having erected at a great expence, and under numerous difficulties, (arising from the morassy nature of the ground on which it was built) a strong and substantial *sluice*; they proceeded to make a channel or cut fifteen feet deep, ten feet wide at bottom, and fifty-five feet wide at the top.

It is impossible to describe the ridicule which this undertaking excited. Some thought the commissioners mad; others, and by far the majority, ascribed the boldness of the plan to the liberality of the proprietors, in allowing the commissioners three guineas per day for attendance and management; and drew this sage conclusion, that the work would never be finished, but would be protracted till the expences *would equal* the value of the moor.

Uninfluenced by letters, or by menaces, the commissioners persevered; and they have the satisfaction of seeing the principal difficulties overcome; and of hearing those very men, who were most violent against the measure, acknowledge their error, and candidly confess that the work is well executed, and promises to be effectual.

It may be necessary, by way of instruction to others engaged in schemes of the like nature, to state, that had the drain been made less wide at the top (and the opponents insisted that it should have been only twenty-six feet wide) it would have collapsed, or fallen together; as it was, there were numerous, and alarming slides; the repairing of which cost a considerable sum, and there can be no doubt, but something of this kind, will happen for years to come; for the substratum at the depth of sixteen feet, is so soft,

and morassy, that it gives way to the superincumbent clay, and rises up in the middle of the drain.

This cut from the Dunbald sluice to the moor (a distance of about two miles and a half) cost four-pence per cubic yard, or in the whole about three thousand two hundred pounds; from thence, the price diminishes in proportion to the depth and width. Expensive as this undertaking inevitably must be, yet the benefit resulting from it, will most amply repay; for without saying any thing of the injury done to the health of the inhabitants in the circumadjacent country, and which this drain, by rendering the air more salubrious, will totally remove; we may fairly state, that the probable improved value cannot be estimated at less than four hundred and fifty thousand pounds.

Though the total amount of expenditure cannot with precision be ascertained; it may give some satisfaction, if I inform my readers, the probable sum total thereof. The following statement of the account Dr. and Cr. will approach pretty near the truth; but let it be understood, that this calculation is made under the idea of *parochial subdivisions*, without which little benefit will result either to the public, or individuals. The principles which I have in my report on the North East District fixed as *data*, incontrovertible, *viz.* That all commons, however rich and fertile the soil, are unproductive of profit, in consequence of *overstocking*, must be here adhered to, and this argument is equally applicable to old inclosures. Let a farmer put *ten* head of cattle into a given piece of ground where only *five* should be depastured, and the cattle will be of less worth, after the grass is consumed, than they were before: Of what value then is the land?

King's Sedgmoor.

Dr.	£. s. d.	*Cr.*	
To Act of Parliament, and all incidental expences	1628 15 0		
Interest of money borrowed	3500 0 0		
Commissioners	5000 0 0		
Clerk	1500 0 0		
Surveyor	800 0 0	By 12,000 acres, at 30s. per acre, and 25 years purchase	450,000 0 0
Printers	300 0 0		
Petty expences	600 0 0		
Land purchased	2800 0 0		
Drains, sluices, Bridges and roads	15000 0 0	By improvement of 4000 acres of adjacent land, 10s. per acre	50,000 0 0
Award and incidentals	871 5 0		
To which add	32,000 0 0		
For subdividing in each parish	18,000 0 0		
To original value of the moor, say ten shillings per acre, at twenty-five years purchase	150,000 0 0		
	200,000 0 0		
Profit	300,000 0 0		£. 500,000 0 0

N. B. Had the commissioners been empowered to sell land at the commencement of the business, the expenditure would have been reduced 5000l. by the difference in the interest accompt.

This is not the only improvement, for by the addition of such a quantity of rich, and productive grass land, the upland inclosures, and common fields may be greatly advanced in value. In short, it is difficult to point out all the benefits likely to accrue from this grand, but arduous undertaking; beside, though the original value of the moor per acre is stated to be ten shillings, this is done merely with a view to give the arguments against the inclosure the greatest weight; and perhaps it would have been more just, to have stated its value at five shillings per acre, or even less than that, for a right of stocking could be rented for half a guinea per year.

Nor is the improved value at all exaggerated. On the contrary, I am confident it will exceed thirty shillings per acre; for even in this dry summer, three tons of hay per acre have been cut on inclosed lands adjoining, or near the moor, the soil of which lands is in no respect better than that of the moor.

Beside King's Sedgmoor, there are other similar tracts of land on the adjacent rivers Tone, and Yeo, on which no improvement has yet been attempted; namely Normoor, near North Petherton, Stanmoor, Currymoor, West Sedgmoor, &c. near North Curry, West Moor, near Kingsbury, Wet Moor, near Muchelny, amounting in the whole to about ten thousand acres, independent of many thousand acres of low flooded inclosed lands, which might be greatly improved by judicious draining.

These lands are for the most part far superior in their quality to King Sedgmoor; and the example now set before them, will, I trust, remove the mist from the proprietors eyes, and make them see in a true light their own, and the public interest.

Since writing the above, I hear to my astonishment, that at a meeting held a few days since at Borough Bridge, for the purpose of taking into consideration the inclosing, and draining of Stanmoor and Currymoor, the same was objected to by the *agents* of Lady Chatham and Mr. Portman, and by Mr. Brickdale and other proprietors in *person*.

These lands would fairly be worth forty shillings per acre the moment they were drained and divided; and if taken from the tenants, the original estates would not be reduced in their annual value one farthing. But on this subject, I have before enlarged

very

very fully, and shall therefore only remark to those who are influenced by a humane regard to the right, and comfort of the cottager, that very few habitations of that description are to be found near these moors; and a great part of those which do exist, possess rights, which when divided, may be worth two or three hundred pounds, and if sold, will enable a man to rent an estate of one hundred pounds per annum, and to keep twenty or thirty cows, in the management whereof his whole famiiy would become useful, and habits of industry, care, and œconomy, would by degrees be established.

Adjoining this extensive plain on the south side, lies a tract of elevated land, composed principally of sea sand, and shells; well adapted to the purposes of tillage, and in its nature so fertile, that potatoes, turnips, carrots, hops, madder, liquorice, and indeed almost every root, or plant useful in husbandry, might be grown on it in high perfection.

The arable is for the most part in common fields, and though exhausted by constant cropping, lets for near thirty shillings per acre. The wheat produced is of prime quality; and as to barley, it is supposed that Ched-zoy, Westonzoyland, Middlezoy, and Othery, produce the best in the county. Were the common field lands of these parishes divided into separate property, a portion of the new allotments in Sedgmoor annexed; and the whole comprized in farms of four or five hundred pounds per year, and let to some enlightened sheep and turnip farmers, these parishes might vie with any in the kingdom, both as to the *quantity* and *quality* of produce; but this cannot be effected whilst the lands are held by the present tenure. They are now occupied by small farmers holding under lives, some one life, some two, and a few three, without any power, or prospect of renewing.

It were to be wished, that all Lords of Manors possessing estates leased out on lives, would continue to grant renewals; and by so doing, I verily think they would promote their own interest; for though it must be acknowledged, that the leasing out a property upon three lives, at the usual price of fourteen or fifteen years purchase, is unfavorable to the interest of the *grantor*, yet I think that when an estate has been so leased out, it is more his interest to

renew,

renew, than to run against the lives; for when compou
of money, be set against the reversionary income, the lat
swallowed up. Great advantages would also result to so
the general adoption of such a measure, for it is well kn
estates falling into hand, are greatly reduced in value,
strictions in the lease be ever so judicious. In confirmat
idea, do we not see that lands held under the church, un
rations, and under charity endowments, &c. *where rene
tain*, are nearly in as good a state as freehold property;
to be distinguished from lands held under private Lor
such renewal is frequently withheld. Various are the
respecting the comparative advantage attending the p
freehold and leasehold property. In favor of the former
ral, and indeed laudable pride of man steps in, and dec
termines. Most men wish to possess property indepen
controul, and the suits, and services exacted under many
a relict of feudal tyranny, highly disgusting to men, for
dom and independence; but let us have recourse to fig
we shall find that two men starting together *with one tho
hundred pounds each*, and purchasing, the one a freehold
fifty-six pounds per annum, at twenty-five years purchase
other a leasehold for three lives, of one hundred pounds p
at fourteen years purchase, would be in very different si
the end of twenty-one years. Calculating the interest o
five per cent, and allowing *three* renewals at two years
(clear income) the leaseholders estate of one hundred p
annum (nett) would at the expiration of twenty-one year
1205l. 18s. 0d. and the freeholders estate of fifty-six p
annum (nett) would at the expiration of the same term,
1900l. 1s. 0d. as the following calculation will confirm.

FREEHOLD, 56*l. per Annum, nett, and* 25 *Years Purchase.*

	£.		
	1400		
Add. Interest	70	5	per Cent.
	1470		
Deduct rent	56		
	1414		1st Year.
Add. Int.	70	14	
	1484	14	
Deduct rent	56	0	
	1428	14	2d. Yr.
Add. Int.	71	9	
	1500	3	
Deduct rent	56	0	
	1444	3	3d. Yr.
Add. Int.	72	4	
	1516	7	
Deduct rent	56	0	
	1460	7	4th Yr.
Add. Int.	73	0	
	1532	7	
Deduct rent	56	0	
	1477	7	5th Yr.
Add. Int.	73	17	
	1551	4	
Deduct rent	56	0	
	1495	0	6th Yr.
Add. Int.	74	15	
	1569	19	
Deduct rent	56	0	
	1513	19	7th Yr.

	£.		
Brought up	1513	19	7th Yr.
Add. Interest	75	14	
	1589	13	
Deduct rent	56	0	
	1533	13	8th Yr.
Add. Int.	76	14	
	1610	7	
Deduct rent	56	0	
	1554	7	9th Yr.
Add. Int.	77	14	
	1632	1	
Deduct rent	56	0	
	1576	1	10th Yr.
Add. Int.	78	16	
	1654	17	
Deduct rent	56	0	
	1598	17	11th Yr.
Add. Int.	79	19	
	1678	16	
Deduct rent	56	0	
	1622	16	12th Yr.
Add. Int.	81	3	
	1703	19	
Deduct rent	56	0	
	1647	19	13th Yr.
Add. Int.	82	8	
	1730	7	
Deduct rent	56	0	
	1674	7	14th Yr.

	£.				£.	
Brought up	1674	7	14th Yr.	Brought up	1849	1
Add. Int. .	83	14		Deduct rent	56	
	1758	1			1793	1
Deduct rent	56	0		Add. Int. .	89	1
	1702	1	15th Yr.		1883	1
Add. Int. .	85	2		Deduct rent	56	
	1787	3			1827	1
Deduct rent	56	0		Add. Int. .	91	
	1731	3	16th Yr.		1918	1
Add. Int. .	86	11		Deduct rent	56	
	1817	14			1862	1
Deduct rent	56	0		Add. Int. .	93	
	1761	14	17th Yr.		1956	
Add. Int. .	88	2		Deduct rent	56	
	1849	16			1900	

Freeholders purchase of fifty-six pounds per annum, n
ing five per cent compound interest, stands him at t
twenty-one years in . . £. 1900 1 0
First purchase 1400 0 0

Loss 500 1 0

LEASEHOLD, 100*l. per annum, (nett) and* 14 *Years Purcha*

	£.		
	1400	0	
Add. Interest	70	0	
	1470	0	
Deduct rent	100	0	
	1370	0	1st Yr.
Add. Int. .	68	10	
	1438	10	
Deduct rent	100	0	
	1338	10	2d Yr.
Add. Int. .	66	19	
	1405	9	
Deduct rent	100	0	
	1305	9	3d Yr.
Add. Int. .	65	5	
	1370	14	
Deduct rent	100	0	
	1270	14	4th Yr.
Add. Int. .	63	11	
	1334	5	
Deduct rent	100	0	
	1234	5	5th Yr.
Add. Int. .	61	14	
	1295	19	
Deduct rent	100	0	
	1195	19	6th Yr.
Add. Int. .	59	16	
	1255	15	
Deduct rent	100	0	
	1155	15	7th Yr.

	£.		
Brought up	1155	15	7th
Add. renewal 2 years purchase nett rent	200	0	
	1355	15	
Add. Int. .	67	16	
	1423	11	
Deduct rent	100	0	
	1323	11	8th
Add. Int. .	66	4	
	1389	15	
Deduct rent	100	0	
	1289	15	9th
Add. Int. .	64	10	
	1354	5	
Deduct rent	100	0	
	1254	5	10
Add. Int. .	62	14	
	1316	19	
Deduct rent	100	0	
	1216	19	11
Add. Int. .	60	17	
	1277	16	
Deduct rent	100	0	
	1177	16	12
Add. Int. .	58	18	
	1236	14	
Deduct rent	100	0	
	1136	14	13

	£.		
Brought up	1136	14	13th Yr.
Add. Int. .	56	17	
	1193	11	
Deduct rent	100	0	
	1093	11	14th Yr.
Add. renewal	200	0	
	1293	11	
Add. Int. .	64	14	
	1358	5	
Deduct rent	100	0	
	1258	5	15th Yr.
Add. Int. .	62	18	
	1321	3	
Deduct rent	100	0	
	1221	3	16th Yr.
Add. Int. .	61	1	
	1282	4	
Deduct rent	100	0	
	1182	4	17th Yr.
Add. Int. .	59	2	
	1241	6	

	£.	
Brought up	1241	6
Deduct rent	100	0
	1141	6
Add. Int. .	57	1
	1198	7
Deduct rent	100	0
	1098	7
Add. Int. .	54	18
	1153	5
Deduct rent	100	0
	1053	5
Add. Int. .	52	13
	1105	18
Deduct rent	100	0
	1005	18
Add another renewal .	200	0
	1205	18

Leaseholders purchase of one hundred pounds per annu
allowing five per cent. compound interest, stands him at th
twenty-one years (admitting three renewals at two years
nett income) in the sum of . . . . . £ 12
Profit 1

First purchase 1

Freeholders loss at five per cent		500	1 0
Leaseholders profit at ditto		194	2 0
Difference	£	694	3 0

N. B. A deduction must be made from Leaseholders profit, for Lords rent and Herriotts, and something from freeholders loss, for increasing value of timber, but these will not invalidate the general conclusions.

The great cause why leaseholds are held in low estimation by the commonalty, arises from the improvidence of the general holders, who for the most part expend the whole income of their estates, without laying by, a fund for the purpose of renewal; hence it follows, that their estates fall into hand, and the owners are reduced from a state of comparative affluence, to beggary; at which event, the general exclamation is, *who would have leasehold property?*

The declivities of the hills north, and east of Sedgmoor, are as barren, as those before stated are productive. The finer particles of the soil, have for ages, been washed into the moor, by heavy rains; and the remaining mould is shallow and sterile. When the moor is drained, and made productive, this lost fertility, may be in some degree restored, by carrying the produce of the moor to the Uplands, either by the sheep fold, or by consuming the hay thereon.

A great part of these high lands are in tillage, but the expence of ploughing is so great, and the produce so small, that it is matter of astonishment to me, how the farmer can gain a livelihood. Somerton and Compton Dundon, two considerable parishes to the eastward of Sedgmoor, are for the most part the property of the earl of Ilchester; and I know no parishes in the county so susceptible of improvement. The arable lands in common field lie so detached, and divided, and the estates, farm-houses, &c. are on the whole so badly disposed, that vast improvements might be made by judicious exchanges, and by a proper arrangement of the property. The soil is naturally good, and around the town of Somerton is a multitude of gardens, which supply the adjacent markets, even so far as Wells and Shepton Mallett, with early peas, beans,

beans, potatoes, &c. and in the month of August with cucumbers by cart loads; these they raise on hillocks, under which is placed about two bushels of *horse* dung, collected in King's Sedgmoor by children, and brought to their gardens on the backs of, or drawn in carts by, asses.

There is a large market held every three weeks at Somerton during the summer months, and to it, is brought an immense number of sheep, principally of the Dorset breed, together with oxen and other cattle; these are purchased by graziers occupying the rich grass lands of the county.

On the summit of Polden Hill the corn land is for the most part in common field, and under the following course of husbandry, wheat, beans, fallow. The general produce of wheat twelve bushels per acre, and of beans the same; very little barley or oats; but in the inclosed fields, clover and vetches thrive exceedingly; and if the farmers were to have more of these articles, and plough less, they would find their account in so doing, for nothing will bring a farmer to poverty, so soon as *poor corn land.*

From the nature of the stone on the surface, as well as from some trials lately made with the borer, I have reason to think that on the northern declivity of Polden Hill, may be found a vein of marl which passes through the parishes of Cossington, Chilton, Eddington, Catcott, Shapwick, and Ashcott, and from thence extends to Butleigh and Kingsweston. Should it prove of good quality, the discovery will be highly important, and be the means of advancing the lands to treble their present value. This marl has been tried at Butleigh and Kingsweston, and I believe with success. It is not improbable that the same vein extends to Yarlington, near Castle Cary, where it has been dug and used with great advantage by J. Rogers, Esq. whose improvements both in agriculture and planting are very meritorious.

I cannot pass over this neighbourhood without noticing the pleasant and fertile parish of Castle Cary, which both in respect to soil, and climate, cannot well be excelled. I could wish some spirited agriculturist would here try, whether the exclusive power of growing good hops, is confined to Hants, Kent, and a few other counties. The luxriancy of the wild hop, the richness and depth of the soil, the mildness of climature, and the security from

violent winds, all conspire to render such a speculation promising. The consumption of the county in this article is immense, and I have no doubt but I could select in different parts of it, many hundred acres, as well adapted to this culture, as any lands at Farnham, and at one fourth the price which is there given, beside a much easier access to manure of all kinds, and a greater and cheaper supply of poles.

In Castle Cary potatoes are grown on a very large scale, and it is no unusual thing to get one hundred and sixty sacks (two hundred and forty pounds each) per acre, the average price about five shillings per sack.

Proceeding to the eastward, and passing by the town of Bruton, you get into the woodlands bordering on Wiltshire, which extend from Pen Selwood to within three miles of Froome.

This forest was disafforested about the seventh of Charles I. and divided into three portions, one whereof was allotted to the Lords of Manors, another to the Commoners, and a third to the Crown. The latter was sold off to the adjoining landholders; Sir Richard Hoare, Bart. Thomas Southcote, Esq. the Duke of Somerset, William Beckford, Esq. the Earl of Corke, and the Marquis of Bath, are the owners of the greater part of the woods now remaining. No great quantity of woodland in this tract of country has been grubbed within the last forty years, but much new ground has been planted during that period, particularly on the hills belonging to the Marquis of Bath, Mr. Beckford, and Sir Richard Hoare, very much to the profit of the owners, as well as to the ornament, and convenience of the country.

These woodlands are in general in a state of coppice wood, with an intermixture of timber, chiefly oak; but the soil, particularly in the vallies, being in general of a strong, yellow clay, is of so cold and retentive a nature, that vegetation is exceedingly slow, and the oak trees, though springing up spontaneously in great abundance, are so apt to get mossy, and dead topped, that few of them come to a large size; and yet on account of its vicinity to good inland markets, which are never overstocked with underwood or timber, the profit from woodland, under any tolerable degree of management, may be fairly taken at nearly double the

value of the adjoining land, in an arable, or pasture state; and the profit arising from the new planted hills, particularly the sandy parts of them, has been in many instances near ten per cent. on the original expence of planting and fencing.

Surely no greater inducement can be held out to the owners to preserve the old woods, or to plant new ones, in soils and situations so favorable to their growth; and in a country that would suffer very materially for want of wood, if deprived of this resource.

But as the profit arising from these woods depends very much on the mode of management, it will not be thought improper to give a few general rules, taken from the appearance of such of those woods as are *well managed*, to the owners of those woods that have a very different appearance; and that appearance not occasioned by any apparent disadvantages of soil or situation.

The natural defect of these woods, particularly that part of them which abounds with oak timber, has already been stated to be the slowness of their growth. This proceeds from three causes.

1st. The native coldness of the soil.

2d. The exposure of a great part of the woods to the south west wind.

And, 3. The injury the woods receive from cattle.

In proportion as these defects have been obviated by art, the woods may be said to be well, or ill managed. Draining the cold, wet parts of them, is the obvious remedy of the first mentioned defect. Screening them from winds, by skirting with Scotch fir, and other hardy plants, and keeping them moderately thick of timber, are the best remedies for the second. But both these remedies will be useless, unless a strict attention be paid to the fences, so as to keep the woods from being cropped by cattle. This is particularly hurtful to slow growing timber, and by it these woods, (though in very few instances subject to common rights) are very materially injured.

Wherever, as is the case in the greatest part of the woods, oak timber is the natural produce of the soil, it should by all means be encouraged, and as its growth to a certain period is usually very rapid, and afterwards altogether as slow, it should be cut when that

that period of stagnation commences, and a fresh set let up to supply the deficiency.

There are many instances in these woods, where although the underwood cannot by the best management be made worth more than eight pounds per acre at sixteen years growth, yet at least twelve small oaks worth twenty shillings a-piece, may be cut regularly at every round of the wood, from every acre, and that without injury to the underwood.

No system will pay equal to this; the underwood, instead of suffering from the multiplicity of trees, will absolutely be better than without any. The shelter afforded by these trees making amends for the damage done by the dropping from them; especially as ash underwood, on which the value of coppice wood greatly depends in this country, (and which does not grow well under the dropping of timber) does not in general thrive well in these cold soils.

The underwood that thrives best in them is oak, willow, alder, and above all *birch*. These kinds of wood will, if proper attention is paid to them, be fit to cut at sixteen years growth; if cut oftener the wood will scarcely be large enough for the purposes of the country; and if suffered to stand much longer, the timber is apt to receive a check from the cold winds, when deprived of the shelter of the underwood. The coal pits of Mendip furnish a never failing market for the poles of this underwood, and the demand for the domestic uses of the country is fully sufficient for the residue; and as not only this end of the county of Somerset, but also the adjoining part of Wiltshire, depend on these woods for oak timber, the demand is, and always will be, equal to the supply.

Sometimes charcoal is burnt for the use of the manufacturers. The wood is then cleaved and heaped into what is called a cord of wood, the dimensions of which are

8	Feet	4	Inches	long,
4	Do	4	Do	high,
2	Do	2	Do	broad.

The price of cleaving and heaping from twenty-two pence to two shillings and three-pence per cord. The expences of burning one hundred cord of wood, the value of which for fuel is six shillings per cord, may be thus estimated:

Cabin for the man . . . . . .
Burning 263 sacks of charcoal, at 6d. per sack .
Halling Do. at 6d. per sack . . . . . .
Unloading . . . . . .
Wear and tear of sacks . . . . . .

100 Cord of wood valued as fuel, at 6s. . . .

PRODUCE

263 Sacks, of 9 bushels each, at 4s. 10½d. per sack
From which deduct . . . . . .

Balance in favor of charcoal in comparison with fire wood . . . . . .

As to the new planted woods, particularly those o parts of Rodenbury Hill, Witham Park, and King although all kinds of wood grow well upon them (an upon the sandy parts of them) provided they are plant sufficiently large to shelter themselves from the winds, appears to grow so well as fir, and particularly *Scots fir*. sional mixture of silver fir, spruce fir, and larch, on s best and most sheltered spots, and a general thin mixtu and other forest trees, add certainly very much to the *beauty* of the plantations in which they have been intro in point of *profit* the Scots fir stands unequalled, for growth, for superiority in value, when grown, and ab its ability to bear the cold exposure of the country.

There are instances on these hills, on land not worth of pasturage three shillings per acre, that plantations of thirty years old, are now worth eighty pounds per acre

* This is proved by stating, that at eight feet and a half distance and forty trees stand on an acre; and that they are worth at a low two shillings and sixpence each.

demand for this kind of wood increases as fast as its uses, become more and more known. A great encouragement, surely to cover the residue of the land of this description with plantations; especially when it is considered that this kind of application of the land, not only contributes so wonderfully to the improvement of the estate on which it is made, and to the employment of the poor of the neighbourhood, but that it also adds so much to the beauty, the comfort, and the convenience of the country for many miles round.

The coldness and sourness of the soil of this part of the country, and particularly of those parts that were once in woodland, tend much to depreciate its value in cultivation, either as arable, or pasture land.

In an arable state it produces few sorts of grain kindly. It will not at all do for barley; it is in general too poor and stubborn for beans, and only a very favorable season can insure a good crop of oats; wheat is its favorite crop, and this is sometimes late in ripening, and is frequently purchased at the loss of two, or three years rest, and of more dung than the pasture part of the country can afford to lose. And the peculiar inaptitude of this soil to return to grass, after it has been once ploughed, (and more especially, as is too often the case where it has been bumbeaked) is an insuperable objection to its being used in any kind of convertible husbandry. In a state of grass land, the lateness of the spring, and consequent length of the winter, reduce its value very much, even in the only mode of application to which it is at all adapted, *viz.* "the Dairy."

The great improvement of which the cold part of this country is capable, may be expressed in a few words, "Shorten the Winter." This is to be done principally by draining off the superfluous water, as the springs of so many principal rivers, *viz.* the *Frome*, the *Cale*, and the *Brew* rise in this neighbourhood, the land must every where be full of it; and secondly, by treading the wet land as little as possible in the winter; but, on the contrary, winter haining, wherever it is practicable, and of course mowing early in the summer, and endeavouring as much as possible to mow and feed every piece of land alternately.

Nothing has contributed more to the improvement of the cold, wet parts of this country, than the plan which seems daily to gain ground, of building sheds for housing cattle in the winter. This not only prevents the land from being poached out in wet seasons, whereby the sward is frequently trod out of sight, but also produces dung of which the land is so much in want, and of which it has hitherto had so little; it being a well-known fact, that many pieces of land have been constantly mown *every year* within the memory of man, and that frequently, not earlier than August, without the least return of dung, or any other manure whatever, save only the assistance supposed to have been given them by the foddering of cattle thereon in the winter, and which in wet seasons has certainly done more harm than good.

Those parts of this district which have a covering of red loam, particularly in Witham Park, and those which lie on the deep sand vein, which runs through Kilmington and Yarnfield, have been much improved by chalk, from Bradley, Long-Knowl, &c. and by this assistance, may be very profitably kept in tillage; but the want of a permanent manure for the cold clays, which comprise the greater part of this district, is a very great objection to the ploughing them at all, and a strong recommendation to the keeping them in a state of pasturage.

Wherever there is, in this cold country an appendage of arable land to a dairy farm, and which is certainly not only useful, but absolutely necessary on account of straw for making dung; care should be taken to prevent the tenant from using any part of the stall dung on the arable land, so as to oblige him to buy lime, rags, ashes, and such like for the latter, and to reserve the whole of the stall dung for the grass land.

Every encouragement should also be given to induce the tenant to under drain the land, or if the landlord has already made the drains, to preserve them. He should also be obliged to mow, and feed the land alternately, and induced by proper cattle sheds, to take his cattle off the wet lands sometime in November, whereby he would not only save treading out his land, but also be enabled to get early grass; he would by that means also be enabled to mow early in the summer, and of course to get a good crop of after

grass,

grass, which he may preserve till a late period in autumn, and by thus shortening the winter *at both ends*, he may be enabled by *art* to reduce it nearly to the length it generally is, in more favored situations, and thereby in a great measure cure the *great natural defect of the country*.

A scheme is on foot for cutting a navigable canal through this part of the county. It is to commence at Poole in Dorsetshire, and to terminate at the junction of the Kennet and Avon, with the Bath and Somersetshire coal canal. If this should be accomplished, there can be no doubt but many advantages would result therefrom.

Exclusive of the articles of coal, corn, &c. which would be conveyed by this canal, the salterns of Lymington, which have for some years ceased to work, would be revived, and the county of Somerset be supplied with salt at a much cheaper rate, and of a quality superior to the Droitwich. The Purbeck, and Portland stone, would be conveyed at an easy expence, and the timber of the forest of Selwood would in return be taken to Portsmouth. In short, the advantages of such a canal are so manifold, that a recapitulation thereof would take up more time than at present I can bestow.

Leaving these forests, and advancing southward, we pass through a rich fertile country, extending from Wincanton through Yeovil, to Crewkerne; here flax and hemp are cultivated in great abundance, the value of which is in proportion to the skill and spirit with which it is cultivated,

A crop of flax greatly depends both on the management of the land previous to sowing, and on the goodness of the seed.

To raise it to advantage it should be sown on new broke up ground, ploughed once, and the surface hacked. It should be harrowed once before sowing, and twice after. Seed imported from Riga, and sold at about fourteen shillings the bushel is to be preferred; and the produce for two or three years may, without change, be sown again; April, and the beginning of May are the months for sowing, and the quantity two bushels and a half per acre.

The great damage done to flax in its growth, is by weeds; and if those people you employ to weed it, be not careful, they may do more harm with their feet, than their hands can do good. At any

rate

rate the weeds must not be suffered to get head of the flax, for if they do, it will become stunted in its growth, and get to no height.

When the plant is arrived at its growth, and is in full blossom, which in common seasons will be about the beginning of July, it is fit to be pulled, if the grower has a greater regard to the produce of the stalk, than to the seed. However, it is a common practice to injure the whole crop, for the sake of the seed; and to let it remain till the seed begins to ripen, so as to have both flax and seed. In this case the land suffers greatly; for flax seeded is a great impoverisher, but if pulled whilst in blossom, is an excellent preparative for turnips, which should always follow a flax crop, instead of wheat. The great reason why the Irish, and indeed most foreign flax is finer than the English, is, because they pull it early, and sow particular spots purposely for the seed; and perhaps it would be politic in Government to grant a bounty on all foreign flax seed sown in this kingdom, so as to reduce the price of foreign seed nearly to a level with our own; by this, the growth of flax (and with it the linen trade) would be encouraged, which has of late suffered considerable diminution by the restrictions to its cultivation imposed by land owners, under the idea of great injury done to the land by the culture of this plant.

After the flax, there are two methods of working it; the first is called *rating of it*, that is, steeping it in water, in order to loosen the rind, and separate it from the stalk; and the other is called *dew ripening*, which is the spreading it on grass land, and by rain and dew producing the same effect. The early flax is mostly watered, which is done by laying the bundles in a pond or reservoir of soft water, and keeping them down by stones, or any other heavy bodies. In the course of seven or eight days the rind will be sufficiently loosened, and they must be taken out of the water, spread abroad, and dried. In this part of the operation, great skill and attention are necessary; for if it be left in the water too long, the threads become rotten, and useless to the manufacturer; it is therefore more adviseable to take it out *too soon*, than to leave it *too long* in the pits. Those who raise flax for the seed and stalk both, go through an operation called ripling; this is separating the seed from the stalk, by passing the flax through a kind of coomb before it is watered.

watered. These coombs are made of iron, and the teeth are so close that the heads cannot pass through, and are consequently pulled off.

It is observable, that the land on which rated flax is spread to prepare it for housing, is greatly improved thereby; and if it be spread on a coarse, sour pasture, the herbage will be totally changed, and the best sorts of grasses will make their appearance. Having myself cultivated flax on a large scale, and observing the almost instantaneous effect produced by the water in which the flax was immersed, I was induced some years ago to apply it to some pasture land, by means of watering carts, similar to those used near London, in watering the roads. The effect was astonishing, and advanced the land in value ten shillings, or fifteen shillings per acre. This liquid is much superior to animal urine. The practice, I therefore strongly recommend to the cultivators of flax; possibly it may not be a new idea, but I believe it is seldom so applied.

The second method, namely dew ripening, may be carried on immediately after the flax is pulled, or it may be dried and mowed, and in the months of February or March the seed may be stamped from the stalk, and the latter spread on the grass land to ripen.

The principal manures made use of by the growers of flax, are the sheepfold, woollen rags, horn shavings, and lime; and it is no unusual thing for the farmer to find ground, manure, ploughing, and all team work; and the laborer to find seed, and all manual labor, dividing at the conclusion, the produce in a way similar to that before stated in my teasel account. The expence and produce of an acre of watered flax may be thus estimated:

Dr.	£.	s.	d.		*Cr.*
To rent of land, &c.	2		0		
To manure . . .	2	10	0		
To ploughing . .	0	8	0		
To hacking . . .	0	5	0		
To harrowing and rolling	0	4	0		
To seed and sowing (Riga) . . .	1	15	0		
To weeding . . .	0	10	0		
To pulling . . .	0	6	0		
To halling to pits and watering. *N. B.* The price of this depends on the distance .	0	10	0	By 40 dozen of flax, at 7s . . .	14 0 0
To taking out of pits, halling, spreading, drying, and housing	0	14	0	By bounty 4d. per stone . . . . (allowing 1s. for expences)	0 10 4
To braking, swingling, and dressing 40 dozen, at 1s. 4d.	2	13	4		
To tythe . . .	0	5	0		
	12	0	4		
Profit	2	10	0		
	£ 14	10	4		£ 14 10 4

To this profit may be added the succeeding turnip crop, and the improvement of the land by the manure; without these, it cannot be considered as very lucrative, for it is precarious, and if a dry season follow the sowing, it frequently happens that the flax does not get to any height, and is scarcely worth pulling. Some people may think the expences over rated, but if they consider that the calculation is made under the idea of an acre *statute measure*, and also that it includes beer, tools, and many other trifling articles of

of expence, they will be disposed to acknowledge it to be correct, at least I can say, that it is drawn from my own experience of its truth,

HEMP.

THE culture of Hemp and Flax agrees in many respects; but in their nature, and form, they are widely different. In flax, the male, and female embrio, are lodged in the same flower; but in hemp the male is found on some plants, and the female on others; they are therefore called *male*, and *female* hemp; that which has only flowers is the *male*, and that which has seeds the *female* hemp. The male is ripe five or six weeks before the female, and they both arise from the same seed.

It requires a deep rich, dry, sandy loam, and abhors a cold, wet clay; a piece of woodland grubbed up generally answers well, fresh land, good tillage, but no dung: even land exhausted with other crops, *if well tilled*, will produce good hemp, and if properly managed, will leave the land as clean as a garden.

The quantity of seed per acre about three bushels, and time of sowing April or May; great care must be taken to keep off the birds, for they are very fond of the seed, and their time of feeding, is principally before sun rise, and within half an hour of sun set. compleat weeding is as necessary for hemp, as flax.

About the beginning of August the male hemp will be ripe, and great care should be taken that the pullers do not trample, and injure the female hemp left standing. It must be gathered into small bundles, and nothing more is necessary than to dry it in a proper manner, so as to make it fit for working.

In managing the female hemp particular regard is to be had to the seed; care therefore must be taken in drying it. After it is tied up in bundles about the size of a yard round, it should be set up in the sun for three or four days, but if the weather be difficult, it may be stacked in small mows of about a waggon load each, where it may remain till it is thoroughly dry and fit to be housed; a little wet does not injure the *stalk*, but it greatly damages the seed. An acre of land will produce from twenty to thirty bushels of seed, and the stalk of the female hemp is more valuable than the stalk of the male. The watering, braking, and dressing of hemp,

is so nearly like those operations on flax, that I shall not detain my reader any longer on this article, and shall only add, that in many cases the crop is more profitable than that of flax.

Between Yeovil, and Taunton, including the parishes of Martock, Puckington, Barrington, Kingsbury Episcopi, Lambrook, South Petherton, Ilminster, Hinton St. George, and the adjacent places, lies a tract of strong, loamy land, from sixteen to thirty inches deep, on a substratum of clay; a more pleasant country can rarely be found. The proprietaries are large, and the estates are mostly held by lives, under the Lords of the fee: there are however many freeholders who possess from one hundred pounds to seven hundred pounds per annum.

The farms are from forty pounds to six hundred pounds per annum, and are composed partly of rich grazing, and dairy land worth from thirty to thirty-five shillings per acre; partly orchards, worth from two pounds to three pounds ten shillings per acre. Sheep walks worth from fifteen to twenty-five shillings per acre; and the arable from twenty to twenty-five shillings per acre.

The rich pasture land is partly grazed with heifers, and partly devoted to the dairy. Few farmers milk their own cows, but they are let to a class of people, scarcely known in other counties, called dairy men. A herd of a good breed will let for six pounds ten shillings per cow; a certain portion of land is devoted to their summer keeping, and a sufficient quantity of hay is provided by the farmer, for their winter sustenance.

This practice of letting dairies, must have originated, either from *pride*, or *indolence* on the part of the farmer's household, and ought in my opinion, to be checked by the landlord.

When the female part of a farmer's family is unemployed (and without a dairy, that must be the case throughout great part of the year) dissipation, folly, and extravagance take the lead, and domestic care, and industry are entirely forgotten. Were I a gentleman of fortune, I would never let an estate to a farmer, whose family was too proud, or too indolent, to undertake the management of the different departments thereof.

The sheep of this district are an *improved* sort of the Dorset, and many considerable ewe flocks are kept, to the amount of four to six hundred;

hundred; they begin lambing about Christmas, and the lambs are weaned in May. After the lambs are shorn, which is at Midsummer, they are worth about fifteen shillings each. The produce of an ewe sold at three years and three quarters old may be thus stated;

	£.	s.	d.
Two lambs, at 15s.	1	10	0
Wool both of ewe and lambs	0	12	6
Folding	0	15	0
Ewe	1	8	0
	£. 4	5	6.

The ewes forward with lamb in October, are sold to the London market for the purpose of house lamb, and sometimes bring thirty-five shillings, though folded to the time of sale.

Some farmers buy wedder lambs about Midsummer (shorn) at fifteen shillings, and keep them about twenty-two months; constantly folding them. They are then sold (unshorn) to the graziers occupying the marsh lands, at the price of twenty-seven to thirty-eight shillings each.

	£.	s.	d.
Folding	1	0	0
Wool	0	4	0
Average price sold at	1	12	6
	2	16	6
Deduct first cost of lamb	0	15	0
	2	1	6

The latter stock requires less care than the former, and at the same time enables the farmer to manure more land; for they may be folded through the whole winter, on the pasture land.

The number of sheep kept in this district is immense, and folding unremittingly pursued.

Clover is the grass generally sown, and their course of husbandry, 1st. Wheat, 2d. Turnips, 3d. Barley, 4th. Clover, Vetches, Flax, Hemp, Peas or Beans, and 5th. Wheat again.

The crops of the *large* farmers are greater than those of the *small*, owing to their sowing more turnips, and vetches, and consequently keeping a larger folding stock. Some of the arable land being in common field is in the following course, 1st. Wheat, 2d. Barley, 3d. Clover, Vetches, Potatoes, &c. and then Wheat again. These crops are comparatively small; wheat is found to succeed better after flax, or hemp (*provided they be not seeded*) than after potatoes, or beans.

Irrigation is not much practised; there is indeed near the town of Ilminster some land watered with the wash of the town, the good effects of which are manifest. In general it is thought that the water issuing, or washed from poor hills, is of little service; and they say that watering in the summer, will rot the sheep.

Fallowing is not practised; the prevailing opinion is, that corn crops equally good may be obtained after turnips, clover, potatoes, peas, vetches, beans, hemp, flax, &c. (if well manured and kept clean) with those after a compleat *summer fallow*. "These are enlightened farmers!"

Let any man visit this country, view their crops, and the condition of the land, and many arguments will not be necessary, to make him an *antifallowist*, at least on soils like these.

The large farmers carry all their dung on their *pasture* land (excellent!) and support their arable by folding, lime, horn shavings, rags, &c. but the small farmers act directly the reverse; the large farmers all plough with oxen; the small farmers with horses. A renter of sixty pounds per year, must keep *three* horses, for he cannot plough with less; and one of five hundred pounds per year will not keep more than *eight*; here is a comparative saving of twenty horses, and justifies my former predilection for large *corn* farms.

The largest uninclosed, upland, common in this district, is the forest of *Neroche*, containing about eight, or nine hundred acres.

The right of stocking on this common, belongs to the parishes of Ilminster, White Lackington, Donyat, Broadway, and others; and in regard to quantity, is unlimited. For want of proper draining, this common rots the sheep, and is of very little value. If inclosed, drained, and cultivated, it might be made worth from twelve to twenty-five shillings per acre.

The land in open field, is for the most part in small pieces of one, two, and three acres each; were proper exchanges made, and the same divided into pieces of ten or twelve acres, it would be advanced in value eight or ten shillings per acre.

This country is very populous, and the wages low, notwithstanding there are many considerable manufactures.

Men's daily labor in winter is 1s. per day, with cyder.

Do. . . summer is 1s. 4d. . Do.

Women's Do. . . winter . . 6d. . Do.

Do. . . summer . 8d. . Do.

Mowing grass, 1s. 4d. per acre, and one gallon of cyder.

barley, 1s. . . Do. . . . Do.

Reaping wheat, 4s. . . Do. two gallons and a half of cyder.

And all other labor proportionably cheap.

Great attention is paid to draining by all the sheep farmers. The common drains are sixteen inches wide, from twenty to thirty deep, and are for the most part *turf drains*; when the turf is strong, they are found very durable.

Paring and burning are universally reprobated.

There is plenty of wood in the hedges, and on the pollard trees, but very few timber, or coppice woods; and yet the country at a distance looks like one continued grove; owing to the numerous *orchards*, every where dispersed. The cyder made in the neighbourhood (particularly in the parish of Martock, which perhaps is one of the largest parishes in the kingdom) is not only excellent in *quality*; but in *quantity*, beyond calculation; from hence the northern part of the county, less abundant in this article, is supplied; and *coal* taken back in return.

There are considerable manufactures of narrow cloth from four to seven shillings per yard, the quality of which, both for appearance, and duration, is not equalled in the kingdom. In these, great numbers of men, women, and children, are employed, but the country being very populous, there is no want of hands in agriculture.

There are also many manufactures of coarse linen, such as dowlas, tick, &c. also of gloves, girt web, &c. all of which give animation, wealth, and comfort to the inhabitants of this rich, and delightful region.

On the whole, the practices of this district deserve imitation; they keep their grass land in high condition, and their arable looks like a garden. They are particularly attentive to the eradication of weeds, and their turnip, and indeed all their fallow crops, may vie with any in the kingdom.

Lately some of the *Leicester sheep* have been brought into this neighbourhood, by Mr. Pester near Yeovil, and by Mr. Lowman near Crewkerne. The carcases of some have been sold in Crewkerne market, and were remarkably fat, and highly esteemed for their delicious flavor; but with all these good qualities, if they cannot walk a mile to the fold, they never will gain much ground in this country.

Passing from Crewkerne to the southward, you enter one of those excavations, or large vales, for which this county is remarkable; comprizing the villages and hamlets of Clapton, Seaborough, Wayford, Woolmingston, Purtington, Cricket-Thomas, Winsham, &c.

Within this vale, commences a district of twenty miles square, (one half in Somerset and the other in Dorset) which ought to be noted for supplying the summer markets at Exeter with *weanling calves*. These calves drop in February, and March, are suckled by their dams for three weeks; when they are housed, and suckled by hand with warm skimmed milk until the month of May; at which time they are sold to the drovers, for the market beforementioned. At Exeter they are bought by the Devonshire farmers, and depastured for three or four years, when they are disposed of to the Somerset graziers, who fatten them for the London market: thus we see that part of what is called the Devonshire breed of cattle is the produce of a small district of the counties of Somerset and Dorset; a breed which will probably, ere long, be generally acknowledged to be equal to any other in the kingdom.

The dairy at Ayshcombe farm, within the parish of Wayford, is a good specimen of the Devonshire breed *.

* Mr. White also of Ilchester has given notice to the Agricultural Society at Bath, that he intends to exhibit, for the premium offered by that Society, a young bull of his own breeding, together with the sire and dam of the *Devonshire* race; and all breeders of horned cattle, are challenged by him, to produce, at the said exhibition, any three of equal value for stock.

The

The arable lands of the parishes of Wayford, Winsham, &c. are troublesome in tillage, and but moderately productive.

The district here mentioned, is justly famous for its rich butter, which is highly admired in the London market, under the denomination of Dorsetshire butter; as well as for its sweet, veined skimmed-milk cheese (scarcely an oleagenous particle in it) with which Honiton market, and from thence Exeter, and the greatest part of Devonshire is supplied.

SOUTH

SOUTH WEST DISTRICT

THE agricultural practices of this division of the co
the attention of all travellers.

The climate, particularly of that part which is called
Taunton Deane, is peculiarly mild and serene; and the
fertile and productive. The eye is agreeably relieved by
mixture of arable, and pasture; and if it be contrasted
parts of the Northern District, it may emphatically b
Land of *Canaan*.

There are however certain parts north west of t
which are mountainous, and subject to that mutability
and moisture of air, generally found on elevated situati

Quantock, Brandon, and Dunkry Hills, may be not
wild, and rugged scenery; and the part which is ca
Beacon, is the highest land in the whole county.

This district may be subdivided into two lesser
cluding 1st. the parishes of Taunton, Wilton, Trull,
Bishopshull, Bradford, Buckland, Ninehead, Wellin
ford, Hill-farrence, Oake, Staplegrove, Norton, Che
loxton, North Petherton, Monkton, Kingston, Cothels
Lidiard, Heathfield, Halse, Ashpriors, Fitzhead
Langford, Budville, Thome, Bathielton, and Running

These parishes comprehend what is generally calle
Taunton Dean.

SOIL.

The soil is a rich loam, interspersed in some places
part of Bradfield, Buckland, north side of Wellin
Sampford, Hill-farrence, Ninehead, Oak and Heath
other parts with sand, or a lighter mould; as King
Lidiard, Halse, Fitzhead, Milverton, Langford,
Runnington.

These hundreds, together with that of North Cur
pally held under the churches of Winchester and W
lands are chiefly possessed by small proprietors.

The major part of the five hundreds of Taunton Dean, consists of customary lands of inheritance, held under the Lord Bishop of Winchester, paying an annual rent. These customary lands pass by surrender, paying to the Lord, fines and heriots, on alienations; there are also many singular customs, within the manor, difficult to be understood, even by the tenants themselves. The descent is that of *Borough English*, with variations. The wife is heir to her husband; and it is no uncommon thing, for a widow on the death of her husband, having children by him, to marry again, and carry the estate into her second family, to the disinheritance of her first.

If the fines, heriots, and other incidental incomes within the manor, were commuted with the Lord, for an increase of the annual high rents; the lands enfranchised by Act of Parliament, and to pass in descent as other lands of inheritance by common law; the income to the bishoprick would be more certain, and the present inconveniencies avoided. In course of time, the proprietors would enlarge their possessions, and the manor would be brought into farms of sufficient extent for the employment of a team; which is not the case at present.

The dry uplands are devoted to tillage, and the rich lowlands to grazing or dairy. On the former wheat, beans, peas, and vetches are the principal crops; and those lands which are capable of improvement by watering, (of which there is a considerable proportion) are so managed, as to produce excellent spring feed for ewes and lambs, together with abundant crops both of hay and after grass, but the water being frequently scarce, the water-courses are a perpetual source of litigation.

There are very few estates entirely in pasture. Every little farmer is fond of the plough; but in most of these small farms, where there is not sufficient employment for a team, the occupiers situation is not better than that of a day laborer.

Much of the arable land will spontaneously produce a variety of excellent sorts of grass, and shortly become good pasture, if laid down in an husbandlike manner. The artificial grasses here sown are broad and white clover, trefoil and ray grass, called here *evergrass*. Many farmers think the latter impoverishes the soil; but they substitute no other perennial in its stead.

The stock is principally neat cattle and sheep; the former of the *North Devon*, the latter of the *Dorset* breed, both excellent of their kind. Many graziers prefer the oxen bred in this district, to those of Barnstable, South Molton, Torrington, &c. and the sheep are considered as equally profitable with the Leicestershire breed which have been introduced, but do not gain ground.

The dairy farmers are accustomed to take in sheep to keep during the winter, (*viz.*) from the beginning of October and November, to the 5th of April; the usual prices are for hog sheep five shillings, and for ewes seven or eight shillings per head. The Dorsetshire flocks are greatly improved by this custom, and the price of keeping is on the advance.

Rotation of crops. On the clayey loam, 1st. Fallow manured with ten cart load of dung, and sixty or eighty bushels of lime per acre, mixed with the earth of the headlands.

2d. Wheat	5th. Clover
3d. Beans	6th. Clover
4th. Barley	7th. Wheat

The Grub has of late years so attacked the wheat sown on the clover lays, that this practice is in some measure discontinued.

In the foregoing rotation, the crops are good; seldom less than twenty-five or thirty bushels of wheat, and the same quantity of beans. The beans are planted promiscuously, after the rate of five bushels of seed to an acre; and after beans they sometimes sow the winter vetch; feed it twice in the spring, and prepare the land for wheat.

In no county are the farmers more attentive to the mode of sowing wheat, or laying up their lands in such form, as to secure them from injury by winter rains; and the quality of the grain is such, as to induce the farmers of Sussex, Hants, and Berks, to purchase it for *seed* at Weyhill Fair, at a great price; seldom less than ten shillings and six-pence per bushel.

An implement called a mattock is much used here, and is peculiar, I believe, to the West of England; it is of great service in sowing wheat and peas on clay lands; the ridges consist of six furrows, with a furrow left unploughed between each ridge, which is called a *comb*. The labourers with a mattock chop the furrows abroad,

abroad, and bring part of the earth against the comb; the seed is then sown and harrowed with two horses abreast, each horse going on the comb; they then (with a plough called a combing plough) divide it; the plough being conſtructed to throw one half of it as a furrow to the right, and the other to the left; the laborers then go over the ridges a second time with their mattocks, and strike those furrows towards the middle of the ridges, which effectually covers what grain the harrows may have left uncovered, and leaves the ridges in the shape of a neat asparagus bed.

This method is very well calculated for clayey and wet lands, where it would be dangerous for the cattle to trample on the ground.

An acre a day is the usual quantity ploughed.

On light loam the following rotation is practised.

1st. Wheat. 2d. Peas. 3d. Barley. 4th. Winter Vetches, which produce a good feed by the latter end of March, or beginning of April, and are fed a second time, at the latter end of May; the land is then ploughed once, and sown with turnips, which are hoed and consumed before Christmas; and 5th. Wheat again.

A better system is adopted by some, *viz.* substituting barley as the fifth crop on which clover is sown. The clover is well manured the ensuing winter, spring fed, and cut in the autumn for *seed*; after which wheat is sown on one ploughing as the seventh crop.

In the parish of Bishop's Lidiard they frequently plough their wheat stubble soon after harvest, give it a good dressing of rotten dung, and let it lie in ridges during the winter. In the month of February or March they sow carrots, which are fit to be dug up the latter end of July; they then sow turnips or plant cabbages, and after those sow barley and grass seeds. On rich sandy loam this husbandry cannot be too much extolled.

It is not the general practice within these hundreds to give the arable land a compleat fallow. They more frequently introduce what they call *a pin fallow*, which is ploughing after vetches, clover, or beans, two or three times, to prepare for a succeeding crop of wheat. In this way they put on a good dressing of rotten dung before the last ploughing.

On some of their land they have fallows, and wheat alternately, manuring with lime.

A mixture of the earth of the headlands with lime and rotten dung, is the general manure for the ploughed lands, and soapers ashes and rotten dung *alone* for the pasture.

The method commonly adopted for mixing the earth, lime, and dung together, is to carry the dung and spread it on the headlands, or on heaps of earth collected on different parts of the field, and then put the unslaked lime on the dung, covering it up with earth till it is slaked, and fit for mixing; but as the lime is by this method dissolved upon the dung, the richest part of the manure is consumed by the lime, or carried off in vapour.

The ploughs, drags, harrows, rollers, waggons, and carts now used, are much the same as they have been for sixty years past. Of late indeed the double furrow plough has been introduced, and seems to gain ground; all who have tried it, acknowledge its superiority for light soils, and for ploughing the barley or turnip land.

Oxen are principally used, and are for the most part worked in yokes; some however are advocates for working singly in harness, and there can be no doubt but oxen may be used more to advantage this way, than the other. The shape of an ox's breast is peculiarly ill calculated to bear the pressure of the bow, and when worked hard in pairs, they are apt to get into a habit of leaning against each other; by which their progressive motion is much impeded. But of all methods, that which is practised in Portugal, Flanders, some part of Ireland, and other countries, namely working them by the *head* and *horn*, is, in my opinion, the best.

I once saw on the farm of Lord Shannon, near Cork in Ireland, three ploughs at work on a strong soil, drawn each by a pair of oxen abreast, in a manner similar to the application of horses in Norfolk. The harness consisted of a long rein of untanned leather which was fixed to the yoke, and then intersected the horns two or three times; after which it passed from the back of the horn over the forehead; to prevent the bruising of which, a *matting* was placed of sufficient thickness, to secure it from injury. In this way the animals *pushed*, rather than *drew*, and with apparent ease

ploughed

ploughed an acre a day each without a driver, turning at land end, with as much docility, as horses. His Lordship informed me, that two moderate sized oxen, had some time before, drawn home from the corn field, (a distance of two miles) in a French skeleton cart, as many sheaves of wheat, as weighed upwards of three ton, and with no apparent extraordinary exertion.

Drilling has been tried in this part of the county, particularly by two farmers of Halse, and by Mr. Anderdon of Henlade. On light poor soils, it has been found to answer, but in rich strong loams, the corn has proved too rank.

Mr. Anderdon has drilled all his corn for twenty years past. At first he formed an experimental field of four acres, divided into several equal parts, where he tried drilling various crops, in comparison with sowing them broadcast, and finding his drilled and horsehoed crops of beans, wheat, peas, turnips, &c. sufficiently encouraging to proceed to acres, he has continued the practice ever since; by which means he has certainly improved his land, and eradicated weeds.

He at first used Willey's drill plough for sowing double rows, which is to be seen in the repository of the Society of Arts in London.

With this, he drilled two rows, about a foot asunder, on five feet ridges, leaving intervals of four feet for horse hoeing. Since, he has drilled single rows on ridges of three feet, by which means he keeps his ground cleaner, and has a produce equally good with the double rows. Of wheat, he generally reaps from fifteen to twenty-four bushels per acre, which is about the average of the wheat crops of his parish sown in the *broadcast way*.

In the year 1791 he reaped from one field twenty-nine bushels per acre. The field was drilled in single rows, three feet asunder; this may be called the Tullean method of drilling, and was practised many years ago by that enlightened agriculturist Jethro Tull. The prevailing method of the present day, is to drill at intervals of six, nine, or twelve inches. Though the practice of drilling corn has been highly extolled by some, and astonishing instances of produce recorded, yet the writer of this report cannot find that it gains ground in the county of Somerset. If the advantages result-

ing from the practice were so great, as they are represented, surely practical farmers would adopt it. The saving of seed, would alone be a sufficient inducement, and in a national point of view would be worthy the attention, and encouragement of the legislature. *Experience*, that best guide in all agricultural pursuits, has shewn that there are substantial objections to the practice, and they may be comprised under the following heads:

1st. The difficulty in getting compleat drilling and hoeing machines, and laborers skilful enough to conduct the process.

2d. The danger of having too *thin* a crop, whereby it is rendered more subject to rust, blight, mildew, and the effect of wind, than *thick* broad cast crops.

3d. Rankness in the straw, subjecting it to drop before the grain is perfected.

4th. Lateness, and irregularity in ripening.

Let us now state the advantages:

1st. Saving of seed.

2d. Strength and vigor communicated to the land by well-timed hoeings.

3d. Destruction of weeds.

How far these advantages counterbalance the disadvantages, I shall not take upon me to determine. I can only say, that my trials (and they have been repeatedly made on a large scale) have been uniformly unfortunate. In dry seasons, the drilled corn, particularly barley, has been not only *late*, but *uneven* ripe, and this is an unsurmountable obstacle to the sale of it, for the purposes of malting; and in wet seasons the growth of straw has been so encouraged by the hoeing, that it has dropped before harvest, and the grain has been but of little value. Last year I divided a ten acre piece, and drilled part with white Poland oats in equidistant rows of one foot, after the rate of one bushel and a half, and some part after the rate of two bushels and a half per acre.

This was done the beginning of April; three weeks after I sowed *broadcast*, the remainder of the field, with the same sort of seed, after the rate of six bushels per acre. Though sown last, the *broadcast* was ripe a fortnight before the *drilled*. The grain was of better quality, regularly ripe, and the produce ten bushels per acre

more

more. The drilled crop, *sown thick*, was better than the other. Were I to renew my practice of drilling, I would (particularly in spring crops,) deposit nearly double the quantity of seed recommended by the advocates for drilling, and at least a month before the usual time of sowing broadcast.

For beans, peas, vetches, turnips, potatoes, carrots, and all gross growing plants, and roots, *drillling* cannot have a more warm advocate than myself; and with respect to wheat crops on light sandy soils that are subject to weeds, the operation of hoeing which necessarily follows that of drilling, may frequently be of essential service not only to the wheat crop, but to the succeeding ones; but with respect to corn in general, and particularly *barley*, and *oats*, I must for the present demur, at least, till I have seen better proofs in favor of the drill system. Perhaps indeed, the ill success which I have experienced, and particularly the late ripening already mentioned, might have been owing in some measure to the system of saving seed being carried to too great an excess.

I cannot dismiss this subject without paying a just tribute of approbation to that ingenious mechanic and enlightened agriculturist, the Rev. J. Cooke, whose drill machine, and horse hoe, are well adapted to the purposes for which they are designed. Though we cannot accord on the subject of the drill husbandry, I must give my unqualified assent to his general principles respecting the preparation of land for arable crops; and I verily think, that his instruments called the *skuffler*, and *scarifier*, are the best contrivances I ever beheld, both for the pulverization of the soil, and the destruction of weeds.

The usual seed time for wheat is November, but it is frequently sown after turnips, so late as January or February, notwithstanding which the crop is ripe, and harvested in a favorable season, by the middle of August. Colored peas are planted about Candlemas, white peas at Lady Day, horse beans from Candlemas to Lady Day; oats are sown in March, barley in April and the beginning of May; peas are harvested rather before wheat, barley at the end of August, oats and beans in September.

Of wheat they generally sow two bushels, peas four bushels, beans five bushels, planted by women with dibbles or setting sticks promis-

promiscuously all over the land, and the crop is seldom weeded; oats five bushels, barley three bushels and a half.

Of late a few farmers have drilled their beans in rows twenty inches asunder, horse hoeing them; others thirteen or fourteen inches asunder, hand hoeing the alley, at the expence of four shillings per acre; in both these ways, they have deposited nearly the same quantity of seed, as in the promiscuous planting, especially in the closer rows.

The produce has been uniformly superior to those planted in the old method, and the land kept cleaner for ensuing crops.

The common fields in this district are so few, and the uninclosed wastes (a portion of Blackdown and Pickeridge hill excepted) so insignificant, that little improvement can be made in that way. There are a few low common meadows, where frequently the hay crop (provincially "the tonsure") belongs to one man, and the after grass to another, by which means such lands are totally neglected, being neither drained, nor manured.

The waste lands on that part of Blackdown which lie within this county, are supposed to exceed a thousand acres; they are so situated on the declivity of the hill, that floats might easily be made to convey the water, issuing from the springs, over the land.

And if the water should not be found to fertilize, it would not be difficult, or expensive, to convert these floats into drains, and thereby render the ground more dry, and healthy.

The occupiers of estates contiguous to these hills, stock them with young cattle in the summer months, but the distant tenants reap little or no benefit.

The price of labor throughout the whole district is nearly the same, (*viz.*) Men through the year one shilling per day, and beer; women for weeding and common work, six-pence per day; and for mattocking the wheat and hay-making, eight-pence per day; but contract labor is gaining ground daily, and in this way men will earn four-pence or six-pence per day more than at day work.

Excepting some peat turf on Blackdown, there is scarce any sunny land to be met with. On soils any way inclined to a weeping surface, great attention is paid to draining, which is done by

digging

digging the drains deep, filling part of them with clean picked stones, and covering with earth to the depth of six or eight inches. Where stones are scarce, shoulder trenching is practised, but these are liable to be filled up with the workings of the mole, unless water constantly runs in them *.

All tenants are restricted in their leases from paring and burning, and the practice is scarcely known.

This division does not abound with *oak*, but *elm* grows in the hedges, and if their heads are not unfairly lopt, get to a size sufficiently large for the keels of ships of war. For the most part they grow from the inchors or suckers of the neighbouring trees; probably some from seed. Few are planted from nurseries, nor is there often any occasion for it, elm being the spontaneous production of the country.

Their heads or side branches are seldom mutilated, it being underſtood that the stem swells, in proportion to the sap that is drawn from the root to the head.

PROVISIONS.

The price of provisions is comparatively moderate. In Taunton the best beef, mutton, veal, and lamb, may be had by agreement with the butchers, at four-pence per pound the winter, and three-pence halfpenny the summer half year; turkey, three shillings and six-pence; goose, three shillings; ducks, two shillings and sixpence a couple, and fowls, two shillings; fish, at certain times, very cheap.

* The great skill of draining land consists in cutting off the water at its source. One deep drain judiciously placed, will frequently preclude the necessity of any other; in most instances such a drain should be near that part of the declivity from which the springs issue. This depends on the position of the clayey substratum, and on the height of the reservoir from whence the springs are fed. A judicious survey of the adjacent land, and a liberal use of the borer are necessary; preliminaries to a cheap and effectual remedy for wet land, and there are few men in the kingdom possessed of equal skill in this department of agriculture with Mr. Elkington of Warwickshire, whose fame is not confined to the county in which he lives, but is known and acknowledged in many parts of the kingdom.

LEASES.

By the custom of the manor of Taunton Dean, the tena
without a licence from the Lord, to let his customary l
more than a year and a day; but to encourage good husba
has been usual of late years to grant rack rent leases for sev
teen, or twenty-one years.

The tenant covenants with the landlord, not to sow rap
or flax; these crops being considered as great exhausters,
no return in manure. It has also been common to allow t
church and poor rates, but it is to be doubted whether
are in this case better provided for, although the rates
maintenance increase; for the occupiers, when no ways in
are apt to be remiss in looking into the poors concerns.

Of late years this burthen has been thrown on the tenant
of raising his rent.

At the commencement of the term, it is usual for the la
put the premises in compleat repair; after that, the ten
reed, spars, and carriage of materials during the term
landlord timber, stones, and lime. The handicraftsmen
between them.

In this way the landlord and tenant being mutually in
the expence of repairs is lessened, and the buildings are
better order.

The tenant also covenants to take care of sapling an
trees, and to carry one hundred and twenty horse seam
twelve cart load) of dung, or fifteen hogsheads of lime,
portion of both mixed with earth on every acre of land, c
to arable, and to take but three crops of corn, before t
quantity be renewed. He also covenants never to sow t
of wheat in succession, nor to convert to tillage any m
old pasture without leave, under the penalty of five pound
per annum for the remainder of the term.

MANUFACTURES.

About a century ago the woollen manufactories in the town of Taunton were in a very flourishing condition, and of course some of its benefits devolved to the agriculturist; but of late years the warmth of party at the elections of their representatives in Parliament has ran so high, that it has not subsided from one election to another; by which means manufactures declined, and have been removed to Wellington and other places. So that it may fairly be inferred, that if the right of election to members in Parliament has been injurious to any borough in the kingdom, it has been so to this.

There are, however, some hopes that trade may revive here, as the carding and spinning machinery have been lately introduced with considerable spirit, and perseverance. Some gentlemen in this town have lately formed a connection with the patentees possessing the secret of making cloth without either spinning, or weaving; and it must be acknowledged, that the samples they have exhibited, give flattering prospects of success.

Though the trade of Taunton has declined, yet considerable manufactories are carried on at Wellington, Wiveliscombe, and other places; and many thousand hands are employed therein.

Before I quit this rich, and delightful vale, I must not pass by unnoticed, their orchards, from which cyder is made in the highest perfection. There are many gentlemen in the neighbourhood of Taunton, who sell their best cyder for five or six pounds per hogshead; and it is supposed that they possess an art, peculiar to themselves, of conducting the fermentation, and thereby preserving a rich, and delicious flavor. The best fruit delights in a strong clayey soil, and it is common to mix a certain quantity of bitter apples, which add much to its quality for keeping; but unless great attention be observed in making, the labor is in vain; for cyder requires much greater nicety of management, than malt liquors. The apples are suffered to fall off the trees, or when tho-

roughly ripe, are picked with great care*. They are then put in heaps to ferment, and remain in that state for three or four weeks; after they are ground, and the liquor is expressed, it is suffered to remain in tubs, from thirty to forty hours, when a scum, or froth, will rise on the top; this they narrowly watch, and when it breaks, they rack for the first time into vessels; after which unremitting attention is necessary to prevent *excessive fermentation* by early and frequent rackings.

Where the natural soil is not good of itself, such manure should be mixed with it as best suits its temper.

If the soil be a cold heavy clay, horse dung, coal, and soapers ashes, will bring it to a due temperament.

If it be light and hollow, marl, or mud from ponds and rivers, highway dirt mixed with lime, cow dung, &c. will mellow and inrich it, and if the spade be occasionally employed to dig around, without wounding the roots, a fruit tree may be made to bear more abundantly, and to produce richer fruit.

Improvement of the heads is also of as much consequence as of the roots; and this should be particularly attended to in the early growth of apple trees. This is reckoned a very material part of tree husbanding, for according as the head of the tree is first trained, so it will grow in a form more or less regular. Even in old orchards, judicious pruning has frequently made unfruitful trees, bear in great abundance.

The second division of this district, includes the parishes of Combflory, Bagborough, Stowey, Stocourcy, Crowcombe, Stogumber, Williton, Watchet, Dunster, Minehead, Porlock, Timberscomb, Cutcomb, Withy Pool, Winsford, Dulverton, Wivelscomb, &c. &c. together with the forest of Exmoor.

The soil of some part of this district is but little inferior to that of the former, but the hills, and forests, are for the most part left

* I would here particularly caution all farmers possessing orchards, not to fall in with the usual custom of beating down the apples with sticks.

Early in the autumn the buds for the succeeding year are formed, and being tender, are soon destroyed. To this violent attack on the branches, may in a great degree be attributed the incapacity of trees to bear fruit two years following.

in

in a state of nature. The corn land is in general good, and the watered meadows in the parishes of Crowcombe, Stogumber, Monksilver, Nettlecomb, Dinniford, Dunster, Dulverton, &c. are as good as any in the county. If we appreciate land by its capacity to keep stock throughout the year, *watered meadows* are invaluable, and it is to be hoped that the different reports, which will no doubt be sent to the Board of their importance, will induce a general application of water, wherever it be of good quality, and there is a possibility of conveying it. A great part of these watered meadows lie on steep declivities, and as the water passes quickly over them, and never lies stagnant, not a rush can be seen; this is not always the case in *low* water meadows, which for want of proper draining are much incommoded by them. Meadows which lie in a low situation and nearly on a level, should be thrown up into convex beds about thirty or forty feet wide, along the ridges of which the water should be conveyed, flowing regularly at the different outlets, and having a free passage in the trenches lying between the beds.

The expence of doing this seldom exceeds six or seven pounds per acre, and the benefit is frequently twenty or thirty shillings per acre per annum.

Excepting those instances where water passes through a town, or after sudden floods carries with it rich particles of vegetative matter, the lands receiving it near the spring head, are supposed to be the most benefited, and the quicker it is made to pass over the land, and the greater the *impetus* given by a large quantity thrown at once, the quicker, and more powerful are the effects.

The first watering commences in November, and is continued with regular intermissions from that time to February. These meadows are frequently, in this temperate climate, fit to receive ewes and lambs, as early as Candlemas, and a constant and regular succession of food from that time to the beginning of May, enables the farmer to view his flock with the utmost complacency, and to look with pity on his neighbours, destitute of such a resource in these trying months.

At the beginning of May, the land is unstocked and watered; after six or seven weeks they mow from thirty cwt. to forty cwt. per acre.

Estimate

Estimate of the value of such land.

	£.	s.
Spring feed from Candlemas to May-day	1	5
35 Cwt. of hay per acre, at 30s. per ton	2	12
After grass to November	1	1
	4	18

Considering it as connected with a large sheep and corn f
all estimates must be below its real value; for it is well kn
that according to the probable plenty, or scarcity of food in
months of February, March, and April, does a farmer appo
his stock for the whole year. Should turnips fail, his onl
source is the hay mow; his ewes suffer, his lambs become stu
and of little value. His meadow ground devoted to the scyt
spring fed, whereby he suffers a diminution of ten hundred of
per acre. These are but a few of the many evils attendant
deficiency of food in the months beforementioned, and must
the importance of water meadow in the eyes of all discerning
landmen; beside, these lands require no dressing, but will pre
an undiminishing vegetation from year to year, and will en
the farmer by means of the sheepfold, to enrich his other l
without injury to these *.

As the different modes of irrigation have been long before
public in a treatise published by Mr. Boswel, of Piddletow
Dorsetshire, and by other writers in different parts of the king
I shall not further enlarge upon this subject, than merely to cau

* On the demesne of J. F. Luttrell, Esq. of Dunster Castle, a large tr
land in a convertible course of tillage is manured with water. The usual ro
of crops, is 1st. Wheat on the ley. 2d. Turnips. 3d. Barley and art
grasses.

It is then suffered to remain in pasture two years, and during that time
at stated intervals regularly flooded by a stream descending from the adj
hills.

The course is then renewed, and this has been the constant practice for
years.

The produce has been in general very considerable, (viz.) of wheat fo
fifty bushels, and of barley fifty and sixty bushels per acre.

the farmer, unexperienced in this branch of improvement, not to feed with *sheep* in the *autumn*; for, though it may be done with the utmost safety in the spring, it is frequently fatal in the *autumnal* months.

The farms in this division are rather less than in the last, but the husbandry is much the same, only there is more land in tillage. The mountainous lands are uncultivated, and are depastured with sheep and young bullocks.

In the vicinity of these uncultivated hills, *viz.* at Bicknoller, Elworthy, Brompton Rolph, and Old Cleeve, oats are the principal corn crop, barley and wheat are grown but on a small scale.

The rotation of crops varies from that of Taunton Dean. Here wheat is generally sown on the ley, and none but very stiff land is fallowed. Turnips are much cultivated, but they are very lavish in the consumption, giving too large a space of ground to the sheep at a time, making thereby great waste.

There are many coppices (chiefly of Oak underwood) on the declivities of Quantock and other hills, but they are under no system of management. Their value, at present, of twenty years growth is from four to ten pounds per acre.

Many considerable manufactories of different kinds of woollen goods are carried on with great success, and afford employment to the inhabitants in every stage of life, but they are accompanied with a gradual increase of the poors rates.

FENCES.

The beech hedges, around Dulverton, Dunster, &c. are not only beautiful to the eye, and an excellent fence and shelter, but are a source of annual profit to the proprietor.

The banks on which they are planted, are six or seven feet high, and between four and five feet wide at the top; the mouldering of the sides is frequently prevented by a dry stone wall, four feet high. There is no ditch, and the hedge consists of three rows of beech, planted on the top of the bank, at about one foot distance. Their growth is very rapid, and they seem to defy the destructive qualities of the sea breeze, so fatal to the white thorn and most other plants;

plants; when at maturity the middle row is cut to the
and the outside rows plashed. The quantity of fuel supp
these hedges is very considerable, and the only objection
be made to them is, that the earth used in the construction
banks is so considerable a quantity, that a large portion
field is robbed of its vegetable matter, and rendered for son
unproductive.

RHUBARB.

At Williton near Watchet, the Turkey rhubarb has bee
vated, and brought to great perfection by Mr. Ball, surg
that place. His management of this root having been part
described in the annual publication of the Society of Arts,
shall not notice it here, and shall only add, that equal attent
success have attended the exertions of James Bernard,
Crowcombe in the same article, though in a different clim
soil.

It cannot be totally foreign to our purpose to mention t
ring fishery of Porlock, Minehead, and Watchet, which fo
years past has been carried on to some considerable extent.

The lower classes of people have, in consequence, obt
cheap and wholsome food, particularly since the legislat
taken off the duty on salt, used in curing these fish, for *h*
sumption.

It were to be wished that this fishery could be further pr
and encouraged, as it would be a means of furnishing emp
ring the winter, for those sailors who are engaged in th
stone, and culm trade, during the summer months.

Their frequent journies across the Channel, make them
lent pilots, and a hardy and skilful race of sailors would oc
ally recruit that grand bulwark of the nation, the *Royal Na*

In an agricultural survey of the county of Somerset, it w
turally be expected that particular notice should be taken
forest of Exmoor; its vast extent, and capability of impro
render it an object well worthy of attention.

This forest extends from north to south about eight miles, and from east to west ten or twelve; containing, according to an accurate survey lately made, about nineteen thousand nine hundred acres. Nearly at the centre of this large tract of land, is an estate called *Simonsbath*; inclosed, and consisting of about two hundred acres, with a dwelling house, licenced and frequented as an inn; and all offices belonging to it convenient for the management of the farm, and transacting the concerns of the forest. Here the forester has an annual sale for the small horses that are bred on the surrounding hills; and here also during the month of May, he meets the farmers from all the country round, who enter in his books the number of sheep which are depastured with him, at the rate of five pence per head. The small horses (in the whole upwards of four hundred) are not taken into better keeping, nor to more sheltered grounds, during the severest winter. When the snow covers the forest to the depth of many feet, these hardy animals are seen in droves, traversing the little vallies and sheltered parts, gathering their scanty fare from the banks of rivulets, and warm springs, but the sheep are almost all driven off for the winter, in the months of November, December, and January, according as the season is more or less severe.

The river Barl runs adjoining to this estate, but resigns its name, on being joined by a small stream about two miles to the east called the Ex. This stream takes its rise in a low swampy spot of ground, about two miles north east of Simonsbath, and runs to the other end of the forest; becomes when joined by the Barl, a very considerable river, and in its passage to Exmouth passes by Bampton, Tiverton, and Exeter, to which, and Exmouth, it seems to give name, as well as to this extensive forest.

Into these rivers, Barl, and Ex, a number of small rivulets from every direction are constantly pouring their streams, and, should ever a general inclosure be attempted, offer an opportunity of watering some hundreds of acres. The water in these rivulets seem of the purest kind; it is not impregnated with any noxious mineral, and the soil, beyond any doubt, is favorable to vegetation.

On the summits of the hills, and especially on the w
north, are *swamps* of many acres extent. They are c
turf, at the rate of eight-pence or twelve-pence per thous
to the tenant of the forest, and would be an inexhaustible
fuel to any inhabitants settled on the better part, as w
black peat for burning lime, working iron, smelting ore
manufacture where fire is used.

The roads are in general, as might be expected in s
tract of land without inhabitants, very bad, and in son
scarcely passable. But the whole abounds with materials
them firm and comfortable, at an easy rate, and few bridg
be necessary.

Excepting a few willows and thorns by the sides of the
not a tree nor a bush, out of Simonsbath estate, is to be see
whole forest; but plantations of most kinds need no mor
nor better soil, than is to be met with here. Oak, firs
and elm, would thrive in all the parts capable of tillage.
very large proportion of the whole, needs but the spirit,
fortune of some one, or more of our wealthy gentlemen in
whose attention, if turned this way, sanctioned by the re
prietor, would render the forest of Exmoor in a few years
a prospect as the surrounding country; and not an useless,
space as it now is, in the map of the county of Somerse
term useless, however, may be said by some to be mi
when the quantity of sheep is mentioned, that is depastur
From the best information to be had, twenty-two thou
summered here, besides the four hundred horses beforeme
but the race is so small, and their value so trifling, that l
fit accrues to the owner. Veins both of copper, and iro
been discovered, that might be worked to advantage, con
how convenient the situation is for shipping off the p
Porlock, Lymouth, and Combmarten, all sea ports, no
more than nine miles distant from the centre of the forest.

From each of those places, and also from Ilfracom
Barnstaple, vessels are every week passing to Wales, (whe
deries have been long established) in *ballast*. A large
lime stone is known to pass from east to west near the cen

forest, and proper stone is found for building on almost every part. And to complete the whole, *slate* of a good quality has been dug up in large quantities not far from Simonsbath; and there is every reason to think it may be found in other places. Water is in plenty in every part, as before-mentioned; several market towns are within a few miles of the forest. Large tracts of land are well adapted for the tillage of flax, which is known to thrive best on old, or unvegetated ground with a strong deep soil. The grain which thrives in the adjoining parishes would, no doubt, flourish here; and a ready sale would be found in the neighbouring markets, or by being exported from the ports on the Bristol channel.

The ashes arising from the weeds, and other extraneous matter on the surface being burnt, and mixed with lime, would be a first dressing preparatory either to a crop of turnips or corn.

From the produce of the crops, would arise manure for future tillage, and what is now a barren waste, might be made worth from five to twenty shillings per acre.

The plan for inclosures and building on the forest, I would recommend, is this: Let there be a small town or village erected near the middle, suppose by Simonsbath House, which should form proper residences for artificers and husbandmen, to be employed in building farm houses, and inclosing many a comfortable estate round them. From this centre town, or village, it would be easy to get a supply of provisions and all other necessaries, as a butcher, baker, shopkeeper, &c. might be there settled. And till other houses or villages should be built, labourers, artificers, and workmen, might find lodgings, provisions, &c. in the bordering parishes, many of which at this time have more labourers than they can well employ. The method of fencing, cultivating, manuring, &c. would vary but little from the plan adopted on Mendip Hills; and if prosecuted with vigor, would tend to lessen the poors rates, and would train up a rising generation to care and industry, instead of theft and idleness.

A RECAPITULATION

OF THE

HINTS FOR IMPROVEMENT,

ALREADY SUGGESTED IN THE PRECEDING P

WITH SOME

ADDITIONAL REMARKS.

1st. *Inclose and cultivate all waste lands susceptible of impr*
and divide and inclose the common fields.

THE various causes which have operated to retard the
of this species of improvement, have been so fully state
that I shall only add by way of encouragement, that the
Mendip Hills inclosed and cultivated in the course of the la
or forty years, are now worth between seven and eight t
pounds per annum, which in their original state did no
fifteen hundred pounds.

It was naturally expected that so great an accession
land, would introduce such a plenty of corn (particularly
in the adjacent markets, as would be accompanied with a
tionable diminution in price; but no such consequences
lowed. The average price of oats for the last twenty years
been less than eighteen shillings per quarter, *Winchester*
From this circumstance, some have been foolish enough
tion the presumed advantage, exultingly crying, " Is
dearer than it was before? Are not the poors rates equal
Where then are the happy consequences derived from the
Corn could not have been dearer had no inclosure take
Hold! the price of every article varies according to the p
scarcity in market; and if the *home* supply be not sufficie

consumption, other markets at a distance must be resorted to; this would have been the case in the neighbourhood of Mendip Hills, had no inclosures taken place. The counties of Wilts and Dorset must have supplied the deficiency, and the *carriage* alone would have amounted to ten per cent. As to the increase of the poors rate, this has been *general*, and may be attributed partly to an increased population, and partly to a growing dissoluteness in the manners of the poor, which ever accompanies national improvement. Active exertions in this way cannot fail to produce a scarcity of labor, and to this, as naturally follows an advance of wages; but the misfortune is, that such an advance, is not accompanied with a growing disposition in the workman, to maintain, in a more comfortable way, his wife and family, or to lay by, against a time of need. No, if he can earn eight or nine shillings in *four* days of the week, the remaining *two* days are devoted to pleasure, or luxury, and the wife and children are in a worse situation, than when more moderate wages compelled him to constant work.

I have known many instances, where the wages of a collier and his family, not exceeding five persons, have been twenty-five shillings per week, and their improvidence has been such, that one week's illness, has brought them to the parish for assistance.

I can also look back to the time, when a commendable degree of pride, operated on the minds of the lower class, and withheld them from applications to the parish for relief, unless in great distress. This pride, I am sorry to say, is totally lost, and the boon is now administered by the parish officer, with *caution* and *reluctance*; and received by the poor, with *dissatisfaction*, and *ingratitude*. From what I have said, let it not be inferred, that I wish to depress the poor, or to debar them of that comfort, which their usefulness in society intitle them to enjoy. No sight can be more pleasing to me, than to see an industrious cottager, returning from his daily labor, with a chearful countenance, and viewing his wife and children, with complacency and delight; and I would contribute to their happiness as much as in me lies, by humbly recommending to our legislators, a serious perusal of a pamphlet, published some years ago, entitled, *Twenty minutes Advice on the Poor Laws*. By the plan there suggested, I verily think the situation of the indus-

trious poor, would be meliorated, and the idle and dissolute be made to contribute towards their support. All those v conversant with the state of the lower class of society, mus that the period of life in which a workman most suffers, is w has five or six small children. Then it is, that the support whole family depends on the father's labour, and his utmos tions are scarcely sufficient to procure them bread; should befal him, he must contract debts; and should this rep happen, before he has extricated himself, his spirits are and the love of Freedom and Independence no longer exi degree of torpor and inactivity succeeds, from which he s ever emerges. To the man in this situation, I would, if p administer relief; and the best method I can suggest, is that couraging, by the authority of Parliament, *Friendly Societie* the regulation of which, the *Bachelor* might be made to co to the support of the *married*; this would in some degree that disposition to celibacy, which is but too apparent am lower orders of mankind, and would add to the comfort of w and to the population of the realm.

A progressive, and too liberal an increase of wages, f labour, will lessen the *quantum* furnished, and will only ten crease the dissolute manners of the poor; whereas the pl gested by the author of the beforementioned tract, would, bly think, be attended with the happiest consequences bo individual, and a national sense; and I hope the time is distant, when this institution, or something similar thereun commence, and the poor be extricated from their present ance, on the scanty bounty of a parish officer, and intitled a support from a fund, to which they have contributed, a part of which, they have a legal, and incontrovertible right

2d. *Where lands are situate on bleak and exposed eminences, the climate by judicious and extensive plantations.*

Though I am no advocate for standard trees *in fence* think large and massy plantations, in elevated situations only ornamental, but profitable,

In this part of the kingdom, they should be placed on the *south west* side of a farm, as the wind from this quarter is most injurious. The *Scotch fir* will endure almost any severity of climate, and the *beech* will resist the destructive influence of the sea breeze; next to these, in point of hardiness, is the *sycamoor*, the *ash*, and the *birch*.

Such plantations may be placed at the angles of the large fields, or on spots too rocky, and uneven to admit the plough. They should be planted when young, and great care should be taken to secure them from cattle; this is best done by a stone wall, for hedges are liable to be broken down by sportsmen, and the work of many years may be destroyed in one night. I would rather see cattle in a field of ripe corn, than in a new made plantation. The damage in one instance is only partial, in the other it is nearly irreparable.

3d. *Wherever marl, lime, or chalk can be procured within a reasonable distance, neglect not a liberal use thereof; and if destitute of such resources, be careful to make as much dung as possible by folding sheep, housing all sorts of cattle, preserving urine, collecting woollen rags, ashes, horn shavings, bones, &c. &c.*

In the northern part of the county of Somerset, both marl and lime are in great abundance. The former is dug for about sixpence per ton, and as it is the produce of the land to which it is applied, the carriage is very trifling. There can be therefore no excuse for those people who possess such a treasure, and yet forbear the use of it. Wonderful, however, as it may appear, I can assure my readers, that there are large tracts possessing veins of this invaluable manure *unwrought*, and in those parts where it is applied, a repetition of it seldom takes place in less than twenty-five or thirty years; so that a liberal manuring does not exceed one shilling and six-pence per acre per annum, and for this, there are many instances of an almost immediate advance of rent of twenty shillings per acre.

Lime is still more plenty than *marl*, and within a distance of six miles from the coal pits, may be burnt for sixteen-pence or eighteen-pence per quarter. Its beneficial effects are universally known, and acknowledged, and yet strange to relate, a second application thereof seldom takes place in less than fifteen or twenty years; this reluctance may be attributed to the baneful effects, not of lime, but of an injudicious and exhausting course of cropping.

Allowing that arable land may be injured by a too liberal use of this manure, it must be allowed, that with pasture no such consequences could ensue. Lime, like marl, kills all the coarse, sour grasses, brings a sweet, and beautiful herbage, grateful to the palate of all cattle; it forms a kind of pan under the surface, by which the nutritious particles of dung are kept longer within the reach of the roots of plants, and is the means of making *ten* load go, as far as *twenty* when applied without a previous liming. Its activity is not abated in the course of three or four years; for if the land be broken up at that distance of time, its effects are as visible in the subsequent crops of corn, as if it were immediately applied. Happy then are those farmers who possess such advantages, and have the sense and spirit to use them. How would a Devonshire farmer rejoice, were he to find limestone and fuel on the same estate. In that part of the kingdom, to the honor of the county be it spoken, they frequently send twenty miles for lime, and give four-pence and six-pence per bushel at the kiln; and our wiseacres of Somerset will scarcely bestow carriage, were the landlord to give them the lime.

Where neither marl, lime, chalk, nor any other similar substance, dug from the bowels of the earth, can be procured, it behoves the farmer to be earnestly solicitous to supply their places with either animal, or vegetable manure. For this purpose let him mow all his stubbles for litter, house his cattle during the winter months, fold his sheep, grow a large portion of turnips, cabbages, vetches, rye, &c. keep a numerous stock, and be moderate in the extent of his corn land. Great attention also ought to be paid to the management of dung when made, for by neglect great part of its strength may be lost. When properly soaked

with urine, it should be conveyed in its strongest state to the turnip land, or any other destined to receive it, in a *low waggon* instead of a cart. These waggons should be made to open at the sides, and the contents should be deposited in large heaps of ten or fifteen loads each, with considerable elevation; and it should be shook abroad with as much care as a gardener takes in making a cucumber bed. By these means a strong fermentation is excited, and turning is unnecessary, and perhaps injurious.

From these heaps placed at such a distance as to manure *one* acre, it may be wheeled and spread for two-pence halfpenny per load. In this method of hauling out dung, three waggons, four horses, and five men are employed; namely, one waggon and two men loading in the yard, another waggon and two men unloading in the field, and the third waggon and driver going backward and forward *.

Wherever waste earth, mud from ponds, highway dirt, ashes, &c. &c. can be procured, compost heaps should not be neglected; these are best calculated for pasture land.

Such a conduct will entitle him to a great produce, and keep his land in good order; but all this will not *do* without—

4thly. *A universal and regular rotation of crops.*

This I conceive to be the most prominent feature, in good farming, and if it were generally adopted, would increase the produce of the land *threefold.*

* In the application of dung the farmers of Somerset begin at the wrong end. It is almost the general practice to manure for the *wheat* crop, whereby the land is made foul, and though there is a great burthen of straw, there is but little corn.

How much more beneficial would it be, to apply all the dung to potatoes, turnips, &c. and to the artificial grasses, making wheat the last crop in the course? It is also usual to manure the turnip land immediately before sowing, but I have experienced great advantage, and more decided certainty of a crop, by manuring in autumn on the stubbles, ploughing the same in, on a fleet furrow, and letting it remain in that state during the winter months.

A custom prevails in this county, and indeed in most
subjecting a portion of land to continual tillage, and of
ing the plough on all the other; this originated from
conduct on the part of the tenant. No sooner is the p
into his hand, than he uses it without mercy, harrassin
with constant crops, till its fertility is intirely exhausted.

The landlord, alarmed at these baneful effects, end
counteract the progress by restraining clauses, and these
criminately applied both to *good* and *bad* farmers; and
dered by the one, as *highly necessary*, and by the other as
grievous.

Were we to advert to the general practice of the te
should be led to justify the caution of the landlord; but w
calculate the loss, yearly incurred by such restrictions,
have cause to regret, that the covetousness of the occupi
have rendered necessary a conduct, so inimical to the ge
of the kingdom.

In respect to low meadow land, or very rich pasture,
be but one opinion, viz. *that it should so remain*, but it m
lowed, that there are in this kingdom large tracts of old
mossy, *hide bound*, and comparatively speaking, *unproducti*
of this description, might be greatly improved by *plou*
if the following course of crops, and mode of manu
adopted, would be left at the end of three years, of
value it was in the sward.

ON LIGHT LAND.

1st. Peas or oats on the ley.

2d. Vetches fed off, and the land manured with li
sheepfold preparatory to turnips.

3d. Barley and artificial grass-seeds.

In which let it remain till the grasses fail, and the
becomes mossy; then renew the course.

ON HEAVY LAND.

1st. Beans on the ley.

2d. Spring fallow, well manured, and cabbages *.

3d. Oats and artificial grasses.

Then remain as before.

The foregoing courses of cropping, cannot possibly injure the land, and by them fallowing is excluded, which (unless in particular instances, such as great foulness, or dearth of manure) I do not think necessary.

6th. *Enlarge the upland corn farms; erect proper buildings and conveniencies for the shelter of the cattle in the winter months, thereby inviting substantial, and well informed farmers, of more enlightened countries, to settle upon them.*

I have before stated the advantages of large corn farms, buildings, &c. and shall therefore only add, that nothing so much contributes to the progress of good husbandry, as example. One good farmer in a parish (particularly if he take no pains to make proselytes) will in a few years convert all the rest; the superiority of his crops, the advancing fertility of his land, the thriving state of his cattle, the abundance of manure, all plead daily in favor of his system, and will in the end, produce conviction, even in the most bigoted mind.

I know no method by which general improvement can be more promoted, than by dispersing the farmers of those counties, whose practices are held in the highest estimation, among those parts of the kingdom, on which the light of good husbandry has never

* The cultivation of cabbages on *heavy* land cannot be too strongly recommended. It puts the clay land farmer on a level, with his neighbours occupying light land, and as a farther encouragement, I can assert, from experiments repeatedly made, that *two* tons of cabbages are equal to *three* of turnips, that they are less subject to injury from frost, and that the expences of cultivation, compared with turnips, do not exceed five shillings per acre.

shone. This would introduce into general practice the turnip husbandry of the eastern districts, with all its concomitant advantages.

The soil, and climate of the county of Somerset, is peculiarly well adapted to the cultivation of this root, and were the pasture lands less rich, and productive, necessity would oblige the farmer to have recourse to this root for winter subsistence. At present the quantity of land devoted to this purpose is trifling indeed, and in most instances the hoe is never used, nor are they consumed with any degree of œconomy.

Though the rent of the land in the elevated parts of this county may be considered high, there are advantages which more than compensate; these are its rich and productive quality in all seasons, the facility with which it may be ploughed, the easy access to marl, limestone and coal, goodness of roads, vicinity to markets; and, lastly, the high price of produce. The last mentioned advantage, is alone sufficient, to induce a residence, for it frequently happens that corn sells twenty per cent. dearer here, than it does in the eastern counties.

6th. *Improve the stock by a judicious selection of males and females for breeding; and be particularly careful to choose a male handsome in those points, wherein the female may be deficient.*

In this department of husbandry, the farmers of Somerset are very inattentive, though they all acknowledge, that the proper stocking of a farm is of the highest importance.

In confirmation of this, I need only inform my readers, that few instances can be produced of a bull being sold for more than fifteen pounds, or a ram for more than five pounds. As to stallions there are but few bred: the mares are served by horses brought every spring from the northern counties, and without this cross, the breed would be contemptible indeed.

It is not within the compass of my undertaking to enter upon this article at large; suffice it to say, that it is a thing of great consequence to the husbandman, and the only caution to be observed,

when he introduces an alien stock, by way of improvement, is, not *to change from rich land to poor*, or from a *warm to a cold climate.*

7th. *Encourage the use of oxen.*

It is universally acknowledged, that too great a portion of land is employed in raising food for horses; and it is also to be known, that a draught horse, if well fed and kept in house thirty weeks of the year, will consume twelve quarters of corn, and thirty cwt. of hay, beside grass; this may be considered as the produce of five acres of good land, which under common cultivation would maintain three men. If therefore the riches of a country consist in the extent of its population, and that population, can only be advanced by increasing the means of subsistence, it follows, that every man who keeps an unnecessary horse is an enemy to his country, by retarding the increase of his own species.

Navigable canals would also greatly tend to reduce the number of horses, and wherever the situation is such as to admit of them, should be encouraged.

To a spirit of speculation and gambling, the country is indebted for the canals now cutting, and others in contemplation; but though the rage has subsided, yet I trust the probable advantages will inspire the present adventurers, with sufficient spirit and vigor to prosecute their undertaking, to its full completion.

The county is rich, populous, and abounds with all those heavy articles of traffic, which will render water conveyance profitable to the subscribers, and beneficial to the public; and if the cuts be made of small dimensions, the cost will be trifling; the consumption of land, and the invasion of private property insignificant: such a canal, could only be considered as a large ditch, and might be so multiplied, as to answer the purpose of turnpike roads.

8th.

8th. *Amend the public roads.*

Nothing so much contributes to the improvement of a c
good roads; before the establishment of turnpikes, man
this county were scarcely accessible.

Seven or eight horses were necessary to draw a waggo
with *two* tons weight, and scarcely ever exceeded the di
twenty miles a day; now, the same number of horses w
five tons, and travel thirty or forty miles. This is an
saving of labor, and yet the establishment of such roads w
popular, and the probable benefit as little credited, as tho
nals are now. The money collected at the gates was cons
a burthen, and the public were for some time loaded with
charge for carriage. This, however, did not last long,
course of a few years, a diminution in the price of car
versally took place, and it has gradually fallen from tha
this."

Before the turnpike roads were established, coal was c
horses backs to the distance of fifteen or twenty miles
collieries; each horse carried about two hundred and a hal
Now one horse with a light cart, will draw ten hundre
or four times more than the horse could carry; can an ins
toll be put in competition with this saving?

In respect to private roads, I would recommend a repe
law compelling statute labor, and changing the same to a
tion in money.

Whenever a farmer is called forth to perform statute
goes to it with reluctance, he considers it as a legal burth
which he derives no benefit. His servant and his horses,
partake of the torpor, of the master. The utmost exertio
surveyor cannot rouse them, and the labor performed, i
half what it ought to be.

This would not be the case, were the surveyor to
money the highway tax; he could then employ such wo
would do him justice, or if they were indolent, or im
could dismiss them.

9th. *Encourage the use of such ploughs, and other instruments, as are best calculated to expedite work and do it well.*

Admitting that there are only one hundred and fifty thousand acres of tillage in the whole county, and that the same are ploughed on an average twice; allowing also that one third of this is of so hilly a nature, that a wheel plough cannot be used to advantage, there will remain one hundred thousand acres capable of being turned with the double plough.

For the sake of argument, let it be also admitted that three horses, a man and a boy, with the common plough of the country, will turn an acre a day, and that the double plough with four horses, and the same number of attendants, will turn two acres. The number of acres will of consequence be ploughed in half the time, and the difference in expence, cannot exceed two shillings per day. Here then might be a saving of twenty thousand pounds per annum, in this article alone, besides the inestimable advantage of expediting work at certain seasons.

Some may doubt the possibility of making the double plough so generally useful; but I can truly say, I have never yet found an instance, where it could not be worked to advantage, and it is well known, that on the various trials made under the auspices of the Bath Society, on lands of the most *difficult nature*, my man, with the double plough, has always gained the prize.

In the counties of Wilts and Dorset, where three large and powerful horses are put to a single plough, the saving by such an instrument would be immense; and this I can confirm, by the testimony of some eminent farmers of the first named county, who in consequence of my recommendation, have introduced them on their respective farms, with great profit and success.

10th. *Sow early in exposed, and cold situations, and be particularly careful not to plough or harrow in wet weather.*

The necessity of this caution is so well known to all practical farmers, that I need not, I trust, enforce it.

11th. *Destroy rats and mice.*

The depredations of these vermin are too important to looked. A sensible farmer of my acquaintance, thinks them, and birds, a thirtieth part of the corn of the kin devoured. Corn in barns they have free access to, and i difficult to keep the mows on stathels free from them. If not brought in from the corn field, a stick, a rake, pike, other body carelessly placed against the mow, will i them.

Destructive therefore as they must be, it behoves all fa make their slaughter a general concern, and it might be do parish rate.

12th. *Introduce threshing machines.*

These are common in the northern parts of this kingd in Scotland, and from the accounts I have received, an purpose, threshing the corn both well and expeditiously. can be but one objection, which is, the lessening of *in door* the winter months. As a substitute for which, let the farm all his cattle, and employ the barnmen in attendance upon

13th. *Let all unmalted corn be sold by weight.*

The different measures of this kingdom, and the confu cident thereto, was so notorious, that great pains have bee by the Houses of Parliament to introduce one general s measure, and the acts of the legislature have been followe the most active exertions of the magistrate.

By these means the Winchester measure is pretty general respect to this county, I may add to the *great benefit of th* and the *great loss of the purchaser.* The calculation in respec comparative price between the old and new measure, was on the difference between eight and nine gallons,' but this neous; the old measure of the county was not less than 1

lons and a half, and in some instances ten gallons, so that the buyer gives seven or eight per cent. more than he ought to give; and I humbly think that *weight* would be a better standard, as the drier and plumper the corn is, the heavier it weighs.

14th. *Grant long leases.*

All farmers who have spirit enough to improve their estates, should have some security for being reimbursed the expence. Where a man's tenure is precarious, and subject to the whim, and caprice of a landlord, little improvement can be expected. Upon unimproved farms, such as wastes, commons, &c. newly inclosed, a considerable expenditure is necessary to bring them into order. Here the tenant should have a lease of twenty-one years, and the rent to advance at fixed periods; for instance, suppose the land in its original state to be worth when inclosed, and accompanied with necessary buildings, five shillings per acre; this rent, if the tenant is to pay all expences of cultivation, should continue seven years; at the expiration of which time, he should be advanced to ten shillings, and at the end of fourteen years, to fifteen shillings per acre.

Or the following method might be adopted; let the landlord pay all expences of cultivation, manuring, &c. and charge five per cent. on the expenditure, allowing the periodical advance to be proportionably less. At all events, the interest of the tenant should be better preserved, than at present; but this is so copious a subject, that I must forbear entering into it, not doubting but it will be ably treated by some of your numerous correspondents. I must now hasten to a

CONCLUSION.

THIS county does not raise grain sufficient for its consumption, nor are the climate and soil of many parts thereof favorable to corn farming; yet were all the improvements before suggested to take place, there cannot be a doubt, but that the produce of the soil

might be increased one third. The quantity of grain ann
chased from the adjacent counties of Wilts and Dorset,
less than one hundred thousand quarters; and were it n
coal that is sent in return, would drain the county of gre
its specie.

The reporter cannot with absolute precision state
amount of acres, or the number of inhabitants in this co
he conceives the former to be about one million of acres,
latter about three hundred and fifty thousand. The aver
per acre of the inclosed and cultivated land, is not less tha
five shillings per annum. The different appropriations of
face of land may be arranged in the following way:

Towns and villages	
Public and private roads	
Rivers, lakes, ponds, &c.	
Woods and plantations	
Meadow and pasture land inclosed	5
Marsh and fen land uninclosed	
Arable and convertible land inclosed	2
Common fields	
Uncultivated wastes	
	1,0

The increased rent which might be produced by drai
marsh lands, and by inclosing and cultivating the comm
and waste lands, may, according to the most moderate cal
be thus estimated:

Number of Acres.	*Description.*	*Increased Rent.*	*Total*
30,000	Marsh lands	0 15 0	22,500
10,000	Common field	0 5 0	2,50
60,000	Uncultivated waste	0 5 0	15,00

To which may be added, a capacity of improvement in the arable and pasture lands *inclosed*, of at least five shillings per acre, amounting to 213,625l.

These blessed effects would be the natural consequence of that spirit of industry, which public encouragement would excite, would add 250,000l. per annum to the rental of the nation, and be much more valuable, than any foreign conquest of treble the amount. Would to God that nations would learn wisdom, and instead of coveting distant territory, improve to the utmost, *that* which they possess.

It now only remains for me to apologize to the Board and the Public, for the desultory and procrastinated way, in which this Report has been executed.

The various public, as well as private business, in which I was engaged, prior to my undertaking this survey, could not be dispensed with; I have therefore only had it in my power, to snatch an occasional hour, from other numerous avocations. Had not my general knowledge of the county, and particularly of the northern and middle districts, enabled me to write on its practices without a personal survey, I must have declined the undertaking. As it is, I have felt, and still feel, a considerable portion of regret, that I did not resign the appointment, as the Board might have then selected some person possessed not only of more leisure, but of superior ability.

Before I take my final leave, I am bound to acknowl
obligations to the following Gentlemen, whom I recon
correspondents to the Board, and whose communications a
ance have in a great degree contributed to enrich the w
to give it any trifling merit, which it may be ſuppoſed to p

Mr. PERKINS, of Oakhill, near Shepton Mallett.
Mr. ANDERDON, of Henlade, near Taunton.
Mr. WHITMASH, of Batts, Ditto.
Mr. ABRAHAM, of White Lackington.
Mr. MATTHEWS, of Bath, Secretary to the Ag
Society.
Mr. CROCKER, of FROOME.
Mr. LOCK, of Brent.
Mr. WHITE, of Sand, near Wells.
Mr. PHIPPEN, of Mere, Ditto.
Mr. KINGDON, of Melverton, near Taunton.
Mr. DAVIS, of Longleat, Wilts.
Mr. PALFREMAN, of North Devon.

With a ſincere wiſh, that the eſtabliſhment of an ag
Board may be attended with all thoſe happy conſequence
its moſt ſanguine ſupporters can deſire,

I remain, their moſt humble ser

J. BILLING

Aſhwick-grove, Oct. 4th, 1794.

FINIS.

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GENERAL VIEW

OF THE

GRICULTU

OF THE COUNTY OF

HUNTINGDO

WITH OBSERVATIONS ON THE MEANS OF ITS IMPROV

BY THOMAS STONE,

LAND-SURVEYOR, GRAY'S-INN, LONDON.

G.T.Brit

RAWN UP FOR THE CONSIDERATION OF THE BOARD OF AG
AND INTERNAL IMPROVEMENT.

LONDON:
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ADVERTISEMENT.

following valuable communication, reſpecting the
te of huſbandry in the county of Huntingdon, and
of its improvement, drawn up for the conſideratio
ard of Agriculture, is now printed, merely for the
f its being circulated there, in order that every pe
ted in the welfare of that county, may have it in
to examine it fully before it is publiſhed —It is th
requeſted, that any remark, or additional obſerva
may occur to the reader, on the peruſal of the follo
, may be tranſmitted to the Board of Agriculture, a
in London, by whom the ſame ſhall be properly atte
ed, when the returns are completed, an account wil
up of the ſtate of agriculture in Huntingdonſhire,
formation thus accumulated, which, it is believed, wi
greatly ſuperior, to any thing of the kind, ever yet

Board will probably follow the ſame plan, in rega
other counties in the united kingdom; and, it is h
ry to add, will be happy to give every aſſiſtance i
to any perſon who may be deſirous of improvin
of cattle, ſheep, &c. or of trying any uſeful experi

INTRODUC

THE county of Huntingdon is an inland diſtrict, which extends in length from North to South about twenty-eight miles; and in breadth from Eaſt to Weſt about twenty-two; its circumference is ſaid to be ſixty-ſeven miles. It contains 4 hundreds, 6 market-towns, 79 pariſhes, 240,000 acres, 8220 houſes, and, probably, about 50,000 inhabitants.

It is well known that very little has been written relative to the general ſtate of this county; and in particular, ſo far as has come to my knowledge, no information has as yet been communicated to the public reſpecting the ſtate of its agriculture; a circumſtance which has rendered the drawing up of the following obſervations the more difficult.

The Ouze and the Nene are the principal rivers in this county; and along their banks the meadows are naturally rich and fertile. There are ſeveral lakes in the county; but Whittleſea meer is by far the moſt conſiderable. It is indeed one of the largeſt in England, being 6 miles long and 3 broad. Some ideas have been entertained of draining it, and it is not ſuppoſed to be impracticable. Such a meaſure is ſupported by ſome, as it would tend to improve the healthineſs of the neighbourhood, and would

add a conſiderable extent of fertile land to the adjoining eſtates; whilſt others are led to object to it, unwilling to be deprived of ſo beautiful a piece of water, or to loſe the excellent fiſh it produces.

The Soils are very various, from the ſtrongeſt clay, with the moſt ſhallow ſtaple of ſoil, to the lighteſt loam; and from the richeſt paſture and meadow, to barren heath.

The higheſt parts of the county are of the ſtrongeſt clay; and ſuch parts as are cultivated are chiefly common fields. As we proceed towards the lower parts, the ſoil is found of a milder nature, and better adapted for profitable cultivation: nevertheleſs, all the different kinds of ſoil are cultivated in a ſimilar manner; a practice evidently contrary to all the principles of good huſbandry; ſince what may anſwer with one ſpecies of ſoil may be deſtructive to another.

From the obſervations I have been enabled to make, without an actual ſurvey, this county may contain about 130,000 acres of commonable meadows, commons, and common fields; 23,000 acres of incloſed arable and woodland; 43,000 acres of incloſed paſture; and 44,000 acres of fen-land.

PRESENT STATE OF AG
IN THE COMMON-I

THE *Common-field land*, in each reſpective pariſh, is divided into three parts; one part is annually fallowed, a moiety of which is folded with ſheep and ſown with wheat; and the other moiety is dunged and ſown with barley in the ſucceeding ſpring. The part which produces wheat, is broken up and ſown with oats; and the part which produces barley, is at the ſame time generally ſown with beans or peas; and then it comes in rotine to be again fallowed in the third year. This is the beſt huſbandry of the common-fields, by which means any given ſpot, produces the ſame kind of grain or pulſe every ſixth year.

But this is not invariably purſued; inaſmuch as many farmers, whoſe conduct is not particularly watched over, attend to their immediate intereſts, without a due regard to their future, and ſow wheat upon part of the land which ſhould produce barley; and oats upon another part of the land, which ſhould produce peas or beans.

This mode of proceeding is called *croſs-cropping*; its tendency is evidently to exhauſt the land, and to render it much leſs fertile in future. The quick ſucceſſion of the ſame kinds of grain, particularly ſo impoveriſhing a crop

as oats, as a ſubſtitute for any kind of pulſe, muſt neceſſarily have that effect.

With every common-field, there is a certain quantity of commonable high land, and meadow commonable at Lammas, when the hay is taken off.

The quantity of common, is generally apportioned to the neceſſary quantity of ſheep kept for folding the land, the ſame being originally laid out for that purpoſe; and where the quantity has latterly been found inſufficient, in conſequence of any improvements in the breed of ſheep, or from the incroachments made by ſelf-intereſted farmers, by ploughing up the balks and headlands adjoining or mixed with the arable lands, more land has been laid down for common.

Other farmers, more provident, ſow a portion of tares, inſtead of oats, to feed their folding ſheep upon, which is good huſbandry; but the practice is far from being general.

From a miſtaken principle in the means of drainage, the land has been ridged up time immemorial in a manner which will render it difficult to make any improvement in it, particularly on the ſtrong clays; that, however, ſhould not diſcourage a ſpirited improver from making experiments, in order to aſcertain how it can be effected to the beſt advantage; the diſadvantages of having land in ſuch a ſtate are obvious.

There is not more than a moiety of it which is very productive, being the middle of the ridges; the ſides extending to the furrows generally produce a very inferior crop, both in point of quantity and quality, which may be very juſtly attributed to the conſtant wet ſtate of that part of the land; and, owing to this practice, a great part of the manure, is conſtantly waſhed away from the ſides of the lands, and in a great meaſure loſt to the farmer.

The

Thus circumſtanced, the draining of the land is very much neglected, being difficult in every point of view, and requiring the greateſt ſkill and attention. The farmers attempt it ſuperficially whilſt the crops are growing, but never think of it when the land lies for a whole winter with ſtubble on it; not conſidering, that the ſucceſs of the enſuing crops, as much depends, upon the land being kept in a ſufficient dry ſtate at one ſeaſon as another.

The buſineſs of fallowing is generally performed when the land is in the drieſt ſtate in May or June; and upon ſtrong clays it requires the labour of ſix horſes and two men to plow at moſt an acre *per* day, generally three quarters of an acre; and no oxen are employed.

It is alledged by the huſbandman, that by ploughing the land for fallow in dry weather, they prevent the ſucceeding crop from being incommoded with weeds to the extent it otherwiſe would be: thus they allow nothing for the cauſe; and ſhort-ſightedly obſerve only the effect. By this mode of proceeding, the ſeeds of weeds are locked up in the hard clods which cannot be pulverized: and three of the moſt material objects of fallowing are wholly unattended to, viz. 1ſt, The pulverizing the ſoil; 2dly, producing the vegetation of the latent ſeeds depoſited whilſt the previous crops were growing, and thereby have an opportunity of deſtroying them; and 3dly, the mixing the different particles of ſoil together, in order to produce a neceſſary fermentation.

The draining of the commonable land appendant on common-fields, is, for the moſt part, unattended to; in conſequence of which, the ſheep have at beſt but a wet layer in winter, and unwholeſome food in ſummer; and from theſe cauſes, and the ſparing proviſion of green, or other winter-food, may, in a very conſiderable degree, be attributed the precarious ſtate of the health of the animals depaſtured thereon.

TATE OF AGRICULTURE INCLOSED LAND, &c.

THE part which is in an arable ſtate, is generally farmed, without any ſyſtem of agriculture laid down between landlord and tenant.

The plough is erroneouſly conſidered as an enemy to the landlord's intereſt; and ſuch parts as are permitted to be broken up, or continued in an arable ſtate, are conſidered as devoted to a certain reduction in value; and if any covenants, with a view to the management of the land, are laid down between landlord and tenant, the tendency of them is more directed to prevent extreme bad management, than to promote the contrary; and wherever the occupiers are bound by any covenants for management, a ſyſtem is enforced, drawn from the miſerable practice of the common-fields already deſcribed, confining the occupier to two crops and a fallow, &c. And I am well informed, that there are not 7,000 acres of land in the county upon which any improvements in agriculture have been introduced and inforced, that have not been known and underſtood for at leaſt a century paſt; the tenantry, having generally no more than a yearly intereſt in their reſpective occupations, want that ſpur to induſtry which can alone be created by granting them leaſes for terms of years, proportioned to the expence of their exertions,

tions, and the neceſſary certainty and ſecurity for their being fully re-imburſed.

The paſture land is under no proper ſyſtem of management, being generally too wet, covered with ant-hills, which are highly prejudicial to the produce; and from the unevenneſs of the ſurface, it is impoſſible to roll it, which is the ſureſt means of deſtroying worms, ants, and other vermin; ſo that the ſweard is not half ſo productive as it otherwiſe would be.

The meadows are overflowed by every ſudden fall of water from the higher land, and the crops very frequently damaged, and often carried away.

The fen is generally unproductive, being conſtantly either covered with water, or at leaſt in too wet a ſtate for cultivation; and conſiderable parts are very frequently forfeited to the corporation of the Bedford Level, the tax annually charged upon the land *for its drainage*, far exceeding any advantages the proprietors can derive from the ſoil, in its preſent ſtate, they rather prefer relinquiſhing their eſtates than to pay the taxes impoſed upon them.

The mode of cultivating the fen land, where any parts are ſufficiently dry to admit of it, is, firſt by burnbaking * the ſurface; then ploughing and ſowing cole or rape-ſeed, feeding the ſame off with ſheep (and very often ſuffering it to ſtand for ſeed); afterwards ſowing oats or other white grain ſucceſſively, whilſt the land will continue to produce a crop, and then ſuffering it to remain two or three years, producing every kind of beggary; then the proceſs of burnbaking is again performed, &c. &c.

* Breaſt-ploughing the ſurface, and afterwards drying and burning it.

PRESENT

ATE OF CATTLE, SHEEP,

Horses &c.

THE *sheep*, upon the inclosed pasture land, are a mixed breed. The Leicestershire and Lincolnshire kinds have been introduced, but they are very inferior to the most perfect of either sort. In some instances, attempts have been made by a few graziers, towards an improvement, but with a view rather to the ram or tup-trade, than that of making a complete and radical improvement in their respective stocks. *The wool*, in the inclosed pasture, weighs, at an average, about 7 pounds *per* fleece. It is of a pretty good quality, and sells at the same price with that of Leicestershire and Lincolnshire.

The neat cattle will not bear any particular description; they are for the most part purchased when young at distant fairs, and are the refuse of the Lancashire, Leicestershire, and Derbyshire breeds, or are bred from these sorts, without any particular care in selecting them.

From the open state of the country, dairy-farming is not much followed; and the cows are used for suckling calves in the Southern part of the county, to supply the London-market.

Oxen are purchased for grazing without any particular choice in the breed, and unfortunately are never used in husbandry.

The ſheep of the common-fields and commons are of a very inferior ſort, except in ſome few inſtances, and very little, if any, care is taken, either in the breeding, feeding, or preſerving them; and from the neglected ſtate of the land on which they are depaſtured, and the ſcanty proviſion for their ſupport in winter, and the conſequent diſeaſes to which they are liable, their wool is alſo of a very inferior quality, yielding at the rate only of from 3 to 4 pounds *per* fleece, and generally bearing an inferior price to the wool produced on the paſtures.

Horſes.—This county is not famous for any particular breed. The farmers' horſes are of the heavy black kind, and they do not generally look forward, to the advantage that might be derived, by ſelling them off for more valuable purpoſes when mature—If due attention were to be paid to the breed, every farmer might ſell off one or more horſes every year at an enormous price for carriages, and ſupply his team with thoſe of two years old at a leſs price.

Population.—There not being any manufactures in this county deſerving notice, agriculture is the only means of occupation. But from the unincloſed and uncultivated ſtate of the country, and the little employment and encouragement given to the huſbandmen, in reſpect to conſtant work throughout the year, the labourers continue with the farmers during the winter ſeaſon to thraſh out their grain; and on the approach of ſummer, they ſet off for more cultivated counties where labour is more required. Whereas, were a proper ſyſtem of huſbandry introduced, theſe labourers would have conſtant employment in their own neighbourhood.

There is a ſcarcity of comfortable cottages for the poor in this county; and the farmers are more ſtudious to prevent this very neceſſary claſs of men from making ſettlements,

ments amongſt them, than to provide them uſeful and profitable employment—the moſt diſtreſſing circumſtance reſulting from which is, that on the approach of harveſt, inhabitants in the country cannot be found to reap, gather, and embarn the corn; and were it not for the accidental peregrinations of the Iriſh, of manufacturers from Leiceſterſhire, and perſons of other diſtant counties, the corn muſt be ſpoiled in the fields. No wonder then, as the execution of this neceſſary and important buſineſs depends upon chance, that, in ſome parts of the county, in times when labourers are ſcarce, a guinea and upwards *per* acre is frequently paid for reaping wheat and oats, which, according to an equal ſcale in the price of labour, might otherwiſe be performed for ſeven ſhillings; and it has often occurred, that at a critical time in harveſt, when labourers have been wanted extremely, half a guinea *per* day, and even upwards, has been paid to them.

Oak timber is not much raiſed in this county, and there is very little fit for the navy; it is uſually cut down when it begins to be moſt valuable for that purpoſe, and conſequently when it ought to be ſpared.

The underwood is not careſully ſelected and planted; the production of it, both in quantity and quality, is for the moſt part left to chance.

IMPROVEMENTS IN THE AGRICU
COMMON-FIELDS

MIXED property, of every deſcription, will be improved by being properly divided and made ſeveral; but a queſtion always ariſes in the minds of the judicious, whether the advantages of any given plan will exceed the expence of carrying it into execution. If we examine the common-fields which are the ſubject of this enquiry, we ſhall find that, for the moſt conſiderable part, proprietors who have a property in many hundreds of acres, in any pariſh, have not more, than two or three acres at moſt, connected together. The reſidue lies in acres and half acres quite diſjointed; and tenants under the ſame land-owner, croſs each other continually, in performing their neceſſary daily labour. A general exchange of land, in the reſpective pariſhes, would be a very deſirable object, in caſes (if any can poſſibly exiſt) where a general incloſure and diviſion could not take place, ſo that each man's property would be allotted together in large parcels: by this procedure, at leaſt a moiety of the occupier's expences, in cultivating the ſoil, might be ſaved.

General diviſions, and incloſures of the common-fields, are the only means of promoting the good of the country to the utmoſt; by means of which, each proprietor will

have his property in a contiguous ſituation, he will be enabled to apply the ſoil to its right uſe; (that is to ſay, the arable land to paſture, and the paſture to arable, as can beſt be turned to his advantage;) to introduce the beſt ſyſtems of agriculture, which are particularly adapted to different ſoils; to effect a competent drainage; to promote the growth of timber; to bring about an arrangement of tithes, ſo highly deſirable for all parties intereſted in the ſoil and its productions. And it may be here obſerved, that the biſhop of Lincoln has, with very great prudence and judgement, ſuggeſted a regulation for a commutation of tithes in his dioceſe, (of which this county is a part), when common-fields are incloſed, which is found to anſwer ſo well, that, it is to be hoped, it will be every where adopted. By this plan, the money payments for tithes, vary, according to the price of corn from time to time; a procedure equitable towards the land-owners and occupiers, and highly ſecure for the clergy, becauſe it prevents the abuſes which too frequently have befallen the intereſt of the clergy, in conſequence of the miſmanagement, of the allotments which have been made to them of land, given in lieu of tithes; for it cannot be ſuppoſed that gentlemen bred up in colleges, are always competent to let the land they receive, ſo as to preſerve the permanency of its yearly value. It is with pleaſure I add, that wherever this plan has been carried into effect, it has been attended with the deſired ſucceſs *.

And laſtly, to improve the breed of cattle and ſheep, and to preſerve them from a variety of maladies and diſeaſes, contagious and otherwiſe, to which they are liable on a common and in common-fields.

* Thoſe who may be deſirous of obtaining further information upon this ſubject, may conſult the regulations in the acts of parliament, paſſed laſt ſeſſion, reſpecting the incloſing of Milton Bryant and Riſely, in Bedfordſhire.

Incloſed land, managed to the greateſt advantage, ſtands not in need of being folded with ſheep, when in a ſtate of fallow, by which procedure the produce of the paſture land is laid upon the arable; to which, according to the old ſyſtem, no return of manure can be made; for under an improved ſyſtem of huſbandry, every part of the farm ſhould be under ſome ſpecies of crop, and fallow totally aboliſhed.

To introduce every argument which might be urged, to prove the ſalutary effects of incloſing commons and common-fields, would far exceed the limits of my preſent plan, or the neceſſities of the caſe.

It has been obſerved by thoſe, who are prejudiced in favour of ancient cuſtoms and methods, that ſome incloſures have not anſwered the expences attending them; but when we conſider the plain truth of the matter, it will be found, that miſmanagement and abuſe in the mode of bringing about the meaſure, as well as in carrying it into effect, has been the true cauſe of the ill ſucceſs which may have ſometimes attended it.

A well-digeſted General Bill for the incloſure of commons, common-fields, and waſte-lands, would wonderfully operate towards the ſucceſs of incloſures, as it would be a means of ſaving a very conſiderable expence in the outſet of the buſineſs.

It ſhould form a material part of the duty of perſons, employed as agents, for proprietors whoſe eſtates are incloſed, to prevent very expenſive buildings from being erected; a profuſion of money has been laviſhed upon uſeleſs buildings, not requiſite for a due occupation of the land, and which is a heavy burden upon the proprietors, without anſwering any good purpoſe.

It has been erroneouſly inſiſted upon by ſome perſons, that certain ſoils are not adapted for that improved ſyſtem of huſbandry, which ought to take place upon an incloſure,

in order to pay the expences attending it; ſtrong clayey land with a ſhallow ſtaple, it is granted, will not admit of ſo much improvement as other ſoils, upon which green winter-food may be produced in perfection, as turnips, cole, rape ſeed, or cabbages; and where the drill huſbandry, under a proper courſe of interwoven meliorating crops, (as peaſe, beans, and other pulſe, with a rotation of white grain and artificial graſſes in ſucceſſion), are judiciouſly purſued. It is alſo certain, that mixed ſoil, light loamy, ſandy, and gravelly ſoils, if they are in a ſtate of common-field, anſwer beſt to the proprietors upon an inclofure, ſuch ſoils, having been farmed according to the ancient common-field huſbandry, are very weak, poor, foul, and unproductive; the quick repetitions of the ſame ſorts of grain, and the too frequently breaking and turning over the ſoil, already too light, tends to let the mucilage be waſhed away, and to eſcape the reach of the roots of the grain; which diſadvantages are eaſily to be remedied, upon the introduction of an improved ſyſtem of huſbandry for ſuch ſoils, which have a direct tendency to produce contrary effects: but this does not prevent even the ſtrong clayey land, with a ſhallow ſtaple (being common-field) from being very much improved by means of an incloſure, upon which a complete drainage may be effected; wheat, beans, artificial graſſes, &c. cultivated to perfection; promoting more abundantly the means of improving and ſupporting cattle and ſheep, and very much meliorating their winter layer; and in many inſtances, on ſuch land, green winter-food may be produced, as cole, or rape, or cabbages, where manure, in pretty ſtrong dreſſings, can be afforded for that purpoſe.

A prejudice is very prevalent amongſt farmers, and ſome gentlemen of landed property are not free from it, viz. that the occupier of any given ſpot of land, muſt certainly be a better judge of the purpoſes to which it may

be applied, and of courſe of its value, than any other perſon. If we examine the full force of this doctrine, it goes to declare, that ſuch occupier, is perfectly maſter, of every improvement that could be introduced upon the farm he occupies; and, to particularize a few points, that he applies the excellent drill-huſbandry of a Duckett, the ſyſtems of the moſt ingenious farmers in Norfolk, &c. the ſheep-farming of a Bakewell, the neat cattle of Tyndell, Culley, or Hoyte; the excellent plan for making water-meadows, recommended by Boſwell, and adopted in Dorſetſhire and the adjacent counties; the moſt approved modes of hollow draining followed in Eſſex, Hertfordſhire, &c.; in ſhort, he muſt have left no known improvement of which it is capable unapplied to his farm, before he can be ſaid to be a competent judge of the value of it; there being no mode of probation, or fixed criterion, by which the abilities of the farmer, or of perſons who are frequently employed to regulate and determine the intereſts of landlord and tenant, are to be tried.

It every day occurs, that perſons wholly incompetent to the taſk they undertake, are thus employed, whoſe knowledge in agriculture was acquired, in an attorney's office, a butler's pantry, or in an upholſterer's ſhop. Precedents of leaſes, made an hundred years ago, are handed down as the governing rule of their conduct; and the grumbling farmer muſt take them, although the covenants are as oppoſite to what they ought to be, as the laws of Turkey are inapplicable to the ſubjects of Great Britain.

The profeſſion of ſurveyor, is frequently taken up by perſons, whoſe knowledge of agriculture was acquired, by dragging a chain, over ſome inconſiderable diſtrict of, perhaps, one or two neglected uncultivated counties; and whoſe ſubſequent employment, is rather directed, to the riveting the barbarous practices and prejudices of the country, than to prevent or remove them.

No man is competent to regulate the huſbandry of an eſtate, who has not been bred up in practical huſbandry, and who cannot with facility apply every known improvement in agriculture, to a ſoil ſimilar to that, on which it has been already applied with ſucceſs.

Oxen will be found very profitable in the cultivation of land; and though every farm cannot be managed to advantage with oxen only, yet a proportion of the labour may be performed by them to the greateſt advantage.

Horſes ſhould be of ſuch ſorts, either light or heavy, according to the ſtrength of the labour they are intended to perform; but of that ſort, that may be ſold off for more valuable purpoſes (as carriages of all deſcriptions) when they are mature *.

The breed of neat cattle, by means of a general incloſure, may be improved at leaſt 40 *per cent.* and ſupported upon the ſame weight of aliment as they are now †.

The ſheep may be improved in their carcaſes at leaſt 10*s.* each, and in their fleeces 3*s.* *per* fleece, in like manner, and under the like circumſtances.

Timber and underwood, which derives its ſupport from be-

* Either by buying in, or breeding one or more foals annually, a team may be ſupplied with young improving horſes, according to the various ſizes of different farms, and thoſe of ſix or ſeven years old ſold off to great advantage for carriages of every deſcription.

† Dairies of cows, may be ſupplied with heifers, in like manner as is propoſed for the ſupply of teams of horſes; and cows, when mature, may be fed for beef to great advantage; and in purſuing this plan to the utmoſt extent it deſerves, equal attention ought to be paid, to the utmoſt value of the carcaſes, as well as to the beſt qualities for the dairy.

low the ſuperſtratum of ſoil, and not dependent upon it, may, in many inſtances, be planted with great ſucceſs, upon land, which is of very low quality, for any of the purpoſes of cultivation.

Whenever underwood is cut, the ſorts ought to be particularly examined, and ſuch as are unproductive or unprofitable, grubbed up, and other ſorts planted in their ſtead: the ſame care ſhould be uſed in ſelecting, planting, preſerving, and cultivating timber, beſt adapted to the reſpective ſoils.

IMPROVE-

OF INCLOSED ARABLE AND PASTURE LAND.

THE application of ſoil, to its right uſe, is a matter of the utmoſt importance to the kingdom in general, but more particularly to the landed intereſt. It will be found, upon due enquiry, that a very conſiderable quantity of land, which is now paſture, cannot be improved without its being firſt brought into an arable ſtate; and it will be alſo found (though in inſtances more rare), that certain parts, now arable, might be better applied to the purpoſes of paſture.

It certainly requires ſome judgement to make the neceſſary diſcrimination, and to draw covenants, between landlord and tenant, for the regulation of the ſyſtem, and due care muſt be taken to ſee them enforced. For want of competent judgement in perſons employed in ſuch concerns, or from neglect, abuſes have frequently happened, and ſelf-intereſted tenants have ploughed up paſture-land, without attending to any improvement; but, on the contrary, have continued to crop the land with grain, whilſt it would produce any, and afterwards it has fallen into the landlord's hands in a reduced ſtate. From ſuch circumſtances, the proprietors became alarmed, and have rather preferred that their land ſhould continue in a ſtate of perpetual paſture, than that it ſhould be converted to

arable

arable under a riſque of its being exhauſted; and prejudice againſt the plough is ſo very ſtrong, that it is not unuſual to meet with perſons in the habit of acting as ſurveyors, who eſtimate the value of land, merely in proportion as it may be conſidered adapted for being laid down in paſture; for I am confident that due proportions of paſture and arable land, beſt anſwer the purpoſes of an occupier; and, according to the ſize of a farm, ſo ought theſe proportions to be laid out; by which means, green winter-food for feeding cattle and ſheep, and ſtraw for litter, is provided; and manure, ariſing therefrom, may be afforded to be laid upon the paſtures; whilſt, by a judicious ſyſtem of agriculture, the arable will, in a very great degree, ſupport itſelf in high condition.

It is no advantage for an occupier to be permitted to uſe the plough, unleſs he can have a ſufficient quantity of arable land to carry him on ſyſtematically for green winter-food, &c.

It is a common practice, where ploughing is permitted, to ſuffer tenants to break up certain portions of paſture land, under agreements, to lay ſuch land down again for paſture at ſtipulated times, and then to break up other parts, ſuch land is generally impoveriſhed when it is laid down, and ever afterwards it continues unproductive in that ſtate.

Farms conſiſting wholly of paſture and meadow land, muſt neceſſarily be impoveriſhed, becauſe a certain quantity muſt be every year mown, and an adequate return of manure, cannot be made, for the injury done by the ſcythe.

Meadow-land upon the banks of rivers, which may be occaſionally watered, and very rich paſture-land in low ſituations cannot be more profitably applied; but paſture land of inferior quality, and more eſpecially ſuch as has been injudiciouſly ploughed, and improperly laid

down, may be converted to more profitable purpoſes, by ploughing and introducing the improved ſyſtem of huſbandry. At leaſt a third of the produce of every acre of paſture-land, as often as it is renewed, is waſted by the ſoil of the animals which depaſture on it. When gentlemen of landed property ſhall attend more to agriculture, and when graſſes ſhall be better underſtood, and the moſt valuable ſorts ſelected, we ſhall have very little land permanently under paſture, ſuch graſſes will be cultivated in like manner to Lucern, and cattle and ſheep will probably be moſt profitably ſtall-fed *. But whilſt any land is uſed as paſture or meadow, it ought to be improved to the utmoſt it is capable of, by levelling the ant-hills, draining, manuring, rolling, &c.

The beſt mode of levelling the ant-hills, is, by cutting every third hill annually, ſpreading its contents, and laying down the ſod upon its baſe (provided it is of a good ſort of graſs, if not, to ſow graſs ſeeds thereon), by which means the whole buſineſs will be performed in three years, and the land will not be over burthened at any time with too much dead ſoil; in other caſes it may be adviſable, upon poor clayey land, to cut up the hills and carry them off; or, in deſperate caſes, to plough the whole. Much depends upon the particular caſes, and a man of judgement will act accordingly.

Whether a farm conſiſts of land which has been long in tillage, or land converted from paſture to arable, the moſt approved ſyſtem of agriculture, beſt adapted to the ſoil, ought to be applied; which, conſidered in a general way, is, by keeping off ſucceſſions of white † grain, to interweave meliorating crops alternately between crops of white grain, to drain, drill, hoe, weed, and preſerve each ſort, to

* A practice intitled to conſideration and experiment.

† Wheat, barley, rye, and oats.

low

lay down for a certain time with graſs ſeeds ſuch parts as ſhall in any previous year have produced turnips, cole-ſeed, or cabbages, with the next crop of grain *.

Stock of every deſcription may be improved to the utmoſt the ſoil is capable of maintaining, which will be beſt carried into effect, by an equal regard in ſelecting the beſt ſorts, and in the care which is taken, in cultivating the means for its ſupport.

A judicious agent, can eaſily draw covenants, adapted to every improvement the ſoil is capable of, giving the occupier full ſcope for doing well, and preventing him from injuring the property he occupies; and thus the great objection to the granting of leaſes, without which no general improvement can be expected, is effectually removed.

* The pariſh of Goodmancheſter, formerly noted for its huſbandry, is now, not more famous than other places in the county for opulent farmers, good management, or valuable cattle. The town ſtands at the extremity of a very large common-field, where the property is extremely mixed, and the labour in agriculture on that account very conſiderable. Here an incloſure would be highly beneficial.

ENT IN MEADOW-LAND.

IT has been already remarked, that the Ouze is the principal river which runs through this county; the Nene touches it as a boundary againſt Northamptonſhire. Along the banks of the Ouze from St. Neot's to Earith, is a large quantity of rich meadow-land, which is ſubject to be overflowed, at all ſeaſons of the year, when the water comes down from Bedfordſhire and Buckinghamſhire with any conſiderable rapidity: it very frequently happens, that the crops of hay are either conſiderably damaged, or totally carried away; the water, which might be made a ſource of great advantage, is, in the preſent ſtate of things, on ſuch account, an evil of no ſmall magnitude. A conſiderable number of water-mills are placed upon this ſtream, which ſerve to increaſe the riſque of damage, and more eſpecially as the conſtruction of their wheels are not generally on the improved plan, and as there is no certain gauge or level generally obſerved to which the water ſhall be held up, nor any poſitive laws for throwing open flood-gates, upon the approach of an increaſed quantity of water. I propoſe, that either the water-mills ſhould be taken away, or, under a general or particular act of parliament, the river ſhould, where neceſſary, be widened, and embanked in a competent manner; that the land-owners ſhould have a power of taking water out of the river, at certain times and ſeaſons,

ſons, to water the meadows, when it may be done with the leaſt injury to the mills; that all flood-gates and waſte water ſhould be regulated in an efficient manner.

The expence of carrying this plan into execution, would be inconſiderable, when compared with the advantages attending it. The ſoil, which will neceſſarily be taken from the nooks and corners of the land, or from the ſides of the river, to widen it, in order more effectually to carry off the floods, will ſerve to embank it; and when this buſineſs is performed, the meadows may be drained where neceſſary; the crop of hay and eddiſh may at all times be preſerved; and the water, which is now the dread of the occupiers, may be made the ſource of a moſt invaluable improvement. A tax may be laid upon the land thus to be improved, *ad valorem*, in proportion to the yearly value of the mills to be taken away, or any other expences attending the plan; which will be but a ſmall drawback from the advantages to be derived from an immediate improvement of the meadows from 20 to 40*s.* *per* acre.

In like manner the meadows on the banks of the Nene might be improved, though not to the ſame extent.

EMENT OF THE FEN.

A Bill was brought into parliament in the laſt ſeſſions, for the purpoſe of altering the courſe of the river Ouze, from a place called Eau-brink, below St. German's Bridge, to the port of Lynn, as a means of improving the outfall of the river, and thereby to produce a better drainage of the adjacent country, and alſo of the Middle and South Levels of the fens (the North Level being in a very improved ſtate).

The fenny part of Huntingdonſhire, is in that diviſion called the Middle Level; and, as I have before had occaſion to remark, ſtands much in need of being drained.

The promoters of the intended cut, have, for their object a nearer direction, from a given point of the river, to the ſea; and thereby avoiding a circuitous paſſage over widely extended ſhallow ſands. The water, from ſo expanded a courſe, is certainly the ſlower in its progreſs to the preſent out-fall, and, conſequently depoſits in its courſe a conſiderable quantity of its impurities; which have, from a great length of time, tended to choak up the out-fall, to the prejudice of the navigation of the river, and the draining of the fens.

The moſt zealous promoters of this plan, are thoſe gen-

tlemen, whoſe eſtates are ſituate neareſt to the intended out-fall, whoſe immediate benefits are certain, and to the utmoſt of their wiſhes; others are leſs ſanguine, whoſe eſtates are ſituated in the more interior parts of the fen. They are ready to admit, that the intended cut will be a fundamental point gained, towards effecting a competent drainage of the whole; but it ſtops ſhort of the utmoſt benefit which they might derive from it, becauſe a great ſyſtem of interior drainage muſt be accompliſhed, before they can derive an equal benefit from the propoſed meaſure.

Perſons intereſted in the navigation of the port of Lynn to the ſea, are ſaid to oppoſe this intended cut, upon the ground, that the rapidity with which the water will come from the high land, thus confined or circumſcribed in its bounds, will not only increaſe the exiſting defects of the harbour (there being ſand-banks below the port of Lynn, which are immoveable, and, on that account, ſediment will be there increaſed), but that it will endanger part of the town.

Arguments ſuppoſed to be deſtructive of each other; for the ſame power which would endanger the town of Lynn, would not fail, in a proper direction, to clear its way, through no ſmall impediments, to the ſea; and it is an axiom in hydraulics, that where a proper fall of water is certain, confining any given body of it to narrower limits, will be the ſureſt means of forcing, cleanſing, and increaſing its depth.

It appears to me a fortunate circumſtance (from whatever cauſe it might happen) that the intended bill did not paſs into a law in the laſt ſeſſions; as the time neceſſarily now given before it ſhall again be brought forward, may be a means of bringing all parties nearer together, and inducing

them to unite, in framing a well-digeſted ſyſtem, for promoting the general drainage of the Middle and South Levels, by which meaſure, 300,000 acres may be improved, and indeed brought to the higheſt ſtate of cultivation.

The expences of carrying it into execution, will bear but a ſmall proportion, to the advantages of advancing ſo neglected and rich a tract of land, to a ſtate of fertility, producing hemp, flax, corn, and the means of breeding and feeding immenſe quantities of cattle and ſheep, inſtead of fiſh and wild fowl, when the happy event ſhall take place. I ſhall preſume to recommend to the proprietors and occupiers, to be more attentive to improved agriculture, rejecting the preſent barbarous mode of management, and avoiding paring and burning *, as a procedure which, if allowable in the firſt ſtep towards cultivation, after a competent drainage is effected, (as a means of expeditiouſly getting rid of the coarſe fen productions upon the land) ought ever afterwards to be condemned; for that ſoil which is already too light, requires not aſhes to be mixed with it, the ſureſt way of making it lighter.

That ſoil which is already too low, ought not to be ſubtilized with fire, the ſureſt means of reducing its quantity; and, I am confident, that if fen land was, when drained, to be managed with the ſame care, in the mode of cultivation, which is ſucceſsfully applied, in the moſt approved huſbandry, upon light high land ſoils, every poſſible good would reſult from it.

* Paring and burning, in bad hands, is to be rejected upon every kind of land, as a meaſure deſtructive to the landlord's intereſt, and only promoting that of the tenant for five or ſix years. But under proper management, the caſe may be otherwiſe.

IMPROVEMENTS IN POP

COMFORTABLE habitations ſhould be provided upon every eſtate, for the induſtrious labourers who are employed upon it; and where it is neceſſary that any new erections ſhall take place, I would recommend that they ſhould be placed contiguous to each other, from which circumſtance, the conduct of each individual, would be known to his neighbours; and giving each labourer a portion of land, to ſupply him with eſculent roots, and (where neceſſary) with the means of maintaining an hardy cow, of the Scotch or Welch breeds; proviſions, thus made, for the neceſſary labourers upon each eſtate, there would be no doubt of an increaſe of inhabitants, whoſe duty, as well as intereſt, it would be, to exert themſelves to the utmoſt of their power, for the farmers, at all ſeaſons of the year, whilſt the influence of the neighbouring magiſtracy, would be a barrier againſt their being oppreſſed.

If theſe meaſures were to be purſued, and the farmers were provident (as is the caſe in Norfolk and Suffolk) to engage a competent number of labourers, mechanics, artificers, tradeſmen, and others (ſome conſiderable time before harveſt) to aſſiſt in the neceſſary buſineſs of it, difficulties, loſſes, and extraordinary expences, would be in almoſt every caſe prevented.

For remarks and additional obſervations.

STILTON, is the only common-field
county, which is divided into four parts, the
of manure, which is here made on account
enable the occupiers (being innkeepers),
moſt conſiderable part of the land, to purſu
tation of crops, different from the adjacen
ſoil is for the moſt part ſtrong and loamy, bu
very much enriched with manure, the na
greatly changed. This place is famous for the
Stilton cheeſe, though made at Dalby in
Here are veſtiges of the ſtone hovel mention
Camden, as having belonged to the late C
hill *. His worthy ſucceſſor, there is a ve
mon-field farmer, and has ſtone hovel p
brought from the quarries in Northampto
are about 2 feet 6 inches high from the grou
with ſtone, (to prevent rats and mice from aſc
which a wooden frame is laid, to ſuppo
depoſited thereon; and ſuch mode of ſecurin
excellent ſubſtitute for barns, and very de
preſervation of wheat, and alſo beans when
ſheaves. Had Mr. Thornhill been cautiou
any wooden props or ladders, againſt his ſt
by which means the rats and mice could al
his corn would probably have been well pr

Near this place is the famous lake cal
Meer, by no means a beautiful object, in any
from the ſurrounding country; but has be
frequented by faſhionable people in the ſu
on account of the excellent ſailing and fiſhin

* On this ſtone hovel, he built a ſtack, which was ſup
about 8col. But when it was taken down for threſhing, a
tion of it had been devoured by vermin.

CONCLUSION

ON the whole, if under the patronage of ſo valuable an inſtitution as the BOARD of AGRICULTURE, proper meaſures were ſpeedily taken, for the improvement of the County of Huntingdon, there can be no doubt, that, in the ſpace of a very few years, the population of the county would be conſiderably increaſed; the ſituation of every individual in it would be materially bettered; and the kingdom at large, would receive a very important acceſſion, to its opulence and ſtrength.

GENERAL VIEW

OF THE

AGRICULTURE

OF THE

COUNTY OF BEDFOR

GENERAL VIEW

OF THE

AGRICULTURE

OF THE

COUNTY OF BEDFOR

WITH

OBSERVATIONS ON THE MEANS OF IMPR

BY

THOMAS STONE,

LAND SURVEYOR, GRAY'S-INN.

G.T. Brit

DRAWN UP FOR THE CONSIDERATION OF

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TO THE READER.

IT is requeſted that this paper may be returned to THE BO
AGRICULTURE, at its office in *London*, with any additional rem
obſervations which may occur in the peruſal, *written in the m*
ſoon as may be convenient.

It is hardly neceſſary to add, that this report, is, at preſent, pr
circulated, for the purpoſe merely of procuring farther inform
ſpecting the huſbandry of this diſtrict, and of enabling every
contribute his mite, to the improvement of the country.

The BOARD has adopted the ſame plan, in regard to all t
counties in the united kingdom; and will be happy to give every
in its power, to any perſon, who may be deſirous of improving
of cattle, ſheep, &c. or of trying any uſeful experiment in huſb

LONDON, JULY, 1794.

INTRODUCTION.

AGREEABLY to the orders of the BOARD of AGRICULTURE, communicated to me by SIR JOHN SINCLAIR, its Preſident, I have undertaken to deſcribe, in as conciſe terms as the extent of ſo intereſting a diſtrict will admit of, the preſent ſtate of the Agriculture of the county of BEDFORD; in the progreſs of which deſign, ſhould any of my ſtatements ſeemingly bear too hard upon the conduct or management of particular individuals, it is not intended by me as any perſonal reflexion upon them. The faithful execution of the important buſineſs committed to my charge, muſt at any rate, ſuperſede every other conſideration: And in whatever inſtances I may commit errors, the ſubject (from the plan ſo happily adopted by the Board, of circulating theſe reports previous to their being publiſhed) lies open to after-diſcuſſion, correction, and improvement. It muſt occur, alſo, to the mind of every perſon of obſervation, and candour, that the buſineſs of a reformer is an arduous taſk, and attended with innumerable difficulties to execute it to advantage, when even a ſingle object is in view; but becomes ſtill more arduous, when a variety of points are to come under diſcuſſion.

Every country has its excellencies and defects, as well in the inherent qualities of its ſoils as in the manners, cuſtoms, and modes of management of its inhabitants. And it behoves thoſe perſons, whoſe province it is, whether as proprietors, agents, ſtewards, or otherwiſe, to correct miſmanagement and exiſting abuſes, in any particular pariſh or diſtrict, to be well aſcertained of the practicability, and the probable advantages, to be derived from ſubverting, or altering

any abuſes, before they ſet out upon the meaſure. If tha
point be not ſtrictly attended to, any miſcarriage neceſſaril
tends to bring a very unfortunate degree of diſcredit upo
many other procedures, the ſucceſs of which would be cer
tain; thereby caſting a damp upon the progreſs and th
ſpirit of improvement.—It is no leſs neceſſary to examin
ſtrictly into the implements of huſbandry, and to compar
them with their uſes, that no advantages may be over
looked, and a leſs applicable ſort ſubſtituted for a better
Such circumſtances have happened, where a violent zeal fo
reformation has ran before every other conſideration. O
the other hand it is to be obſerved, that every occupier o
land, whoſe knowledge and purſuits have been confined t
any given pariſh or diſtrict, has formed to himſelf an idea o
that mode of management, upon the ſoil he occupies, whic
appears to him the utmoſt point of perfection; and he pur
ſues it in a more or leſs direct path, in proportion to his capi
tal, his permanency in his ſituation, and a variety of indirec
views, will allow him. When any queſtion ſhall ariſe upo
the annual value of ſuch his occupation, he does not ſcrupl
to ſtand up with confidence, and aſſert, (what he verily be
lieves to be true), that he knows the value of it better tha
any other man; he has ſown and reaped upon it, he has ſee
it in every ſeaſon for a ſeries of years:—And the plauſibilit
of ſuch aſſertions very frequently have weight, with perſon
of great good ſenſe and abundant knowledge of the world
In vain might any perſon who has made agriculture his par
ticular ſtudy, and who might be verſed in the beſt modes o
huſbandry, of all the improved counties, come forth to in
form him, that his mode of managing his farm tends to con
tinue the ſoil weak and foul; that he too often ploughs it
and crops it with white grain: that meliorating crops ſhoul
be interwoven therewith, and that it ſhould be laid down wit
the firſt crop of corn, ſowing graſs ſeeds, next after a fallow
and turnips, for two or three years: that lime would be

conſiderab

conſiderable improvement upon the ſoil, which perhaps is cheap, and at hand: That a conſiderable portion of meadow land might be flooded at pleaſure, according to the Somerſetſhire plan of making water meadows: That upon ſearching into the bowels of the earth there is a probability of finding marle, or clay, which would greatly tend to fertilize the ſurface, if judiciouſly laid upon it, together with innumerable other improvements which might be pointed out: whilſt ancient prejudices remain, the moſt convincing arguments are ineffectual. It is example, and the imitation of it enforced by gentlemen of landed property, in particular their attention to the conditions on which their eſtates are poſſeſſed, and that only, that can bring about a radical cure.

Theſe general obſervations being premiſed, we ſhall now proceed to the more immediate object of this Report.

GENERAL STATE.

THE COUNTY OF BEDFORD, though ſo near the metropolis, is not remarkable for the excellence of its agriculture or attention to its breeds of cattle or ſheep. The climate is mild and genial, and favourable to the growth of corn or vegetables. Its ſurface is diverſified by the hills and vales, and by nature, there is no diſtrict in the iſland better adapted for improvements.

The principal river is the Ouſe which runs acroſs the county from the Buckinghamſhire ſide, through the town of Bedford to St. Neots in Huntingdonſhire. The Ivel empties itſelf into the Ouſe at Tempsford; beſides which rivers are the Lea and other ſmaller ſtreams of no conſiderable importance.

The extent of this county is computed at 35 miles from North to South, and 20 miles from Eaſt to Weſt, and 145 miles in circuit, containing an area of 480 ſquare miles or 307,200 acres, divided into nine hundreds compriſing 124 pariſhes with 10 market towns (viz.) Bedford, Woburn, Amptill, Biggleſwade, Dunſtable, Leighton-Buzzard, Luton, Potton, Shefford, and Tuddington.

Agriculture, Manufactures and Commerce have made but very narrow ſtrides towards the population and improvement of this county, the making of thread lace forms the principal part of the manufactures; the chief importation is coals for fuel and blackſmith's work, deals, fir, timber and ſalt; its exports are fuller's earth, oak-timber, and corn; the latter commodity is chiefly vended by the growers on the North

part of the county at St. Neots in Huntingdonſhire, and on the South and Eaſt at Hitchin in Hertfordſhire, ſo that except in the town of Bedford, very little buſineſs is done in the corn trade, and with regard to ſeveral of the other towns very little more than the name of market remains. Before a dreadful fire which happened a few years ago at Potton, that town poſſeſſed a very flouriſhing market for corn, &c. but ſince that time, it has not been much reſorted to.

Of the 307,200 acres contained in this county, from the beſt information I have been able to obtain upon the ſubject, it may be computed that 68,100 acres are incloſed meadow, paſture and arable land; 21,900 acres of woodland, and 217,200 acres of open or common fields, common meadows, commons and waſte lands.

Upon a view of the neglected ſtate of the agriculture of this diſtrict, by a perſon acquainted with the improved agriculture of many other parts of England on ſimilar ſoils, and who ſhould be unacquainted with its geographical ſituation, he would naturally conclude, that inſtead of its centre being not more than 50 miles from the metropolis, that it was 500. Inſtead its being deſirably circumſtanced in having a navigable river running from its centre to the ocean, poſſeſſing alſo almoſt every other advantantage which nature or art* could give it for exporting or converting its produce to the greateſt advantage, he would rather conclude, that it was inacceſſible by means of bogs and barriers, and that its produce had no other market than that which aroſe from the mere conſumption of its inhabitants.

It will be expected as a matter of courſe, that as I have the honor of being called upon to repreſent in the beſt manner in my power, the preſent ſtate of the agriculture of this county, that I ſhould alſo give my ideas of the cauſe of the

* I ſhall hereafter have occaſion to mention, a proſpect of great advantage, in a junction of the Ouſe at Bedford, with a branch of the Grand Junction Canal.

neglected condition of the intereſts of the land-owners, the occupiers, and the community in this reſpect, and to ſuggeſt an adequate remedy.—Impreſſed with a due ſenſe of the honor the Board of Agriculture has been pleaſed to confer upon me I proceed to ſuggeſt:

That one principal cauſe of this delay in the improvement of the agriculture of this county, has been the inattention, which, till of late, gentlemen of landed property, have ſhewn towards advancement in rural œconomy, and to improvement in a ſcience in which they are ſo materially intereſted.

The frequently committing the management of their country concerns into the hands of perſons, who are totally unacquainted with agriculture, or, in other words, conſidering that one and the ſame perſon, who receives and pays with great integrity, is equally competent to ſuggeſt or enforce improvements in the uſes or prevent abuſes in the management of land, whilſt, in fact, with the ſame propriety might a mere huſbandman be called from the plough, to amputate a limb, in the expectation of his having the ſkill of an experienced ſurgeon, or a ſeaman be directed to draw a marriage ſettlement, with the technical accuracy, and legal knowledge, of an experienced conveyancer. Hence it is that the dividing and incloſing mixed property, regulating the huſbandry which ought to be obſerved upon it; the granting leaſes with a view to enforce the application of the moſt approved methods which ought to be adopted upon the different ſoils, and thereby ſecuring the occupier in the enjoyment of the fruits of his ſkill, induſtry, and firſt expence, together with the compatible improvement of the inheritance in the land, and many other advantages of great moment hereafter to be enumerated, have not been adopted.

SOILS.

EVERY ſoil and every mixture of ſoil, commonly ſeen upon high land in the united kingdoms, may be found in this county, from the ſtrongeſt clay to the lighteſt ſand.

The property of the reſpective proprietors in which, is mixed in the common fields generally in the ſame way, with but little variation in point of management. In the North and Weſt parts, clayey and ſtrong loamy land moſt prevails, on the South and Eaſt we find mixed, light loamy, ſandy, gravelly, and chalky ſoils*. For the ſake of making myſelf the better underſtood, it is my intention to repreſent the mode of management now practiſed upon the reſpective ſoils with ſome ſuggeſtions of the means which I conceive neceſſary to be adopted for their improvement.

* When I began to inſpect the land it was my intention to repreſent by a map, the mixtures and connexions of different ſoils, but having upon experiment frequently found that one and the ſame pariſh produced four or five different ſoils, nothing but a particular ſurvey could have anſwered the purpoſes of delineation, which would have been foreign from the preſent deſign.

OF STRONG LOAMY AND CLAYEY SOILS.

THE common fields of thoſe deſcriptions of ſoils, are ger
rally divided into three parts, ſeaſons, or fields, one of whi
is annually fallowed, a moiety of which fallow field (accordi
to the beſt mode of management) is annually folded w
ſheep and ſowed with wheat, the other moiety of ſuch fallow
land i dunged and ſown with barley in the ſucceeding ſprin
and that part which produces wheat is in ſucceſſion ſown w
oats, that which is next after fallow ſown with barley, is in t
ſucceeding year ſowed with beans, peas, or other pulſe, a
then ſuch land being again to be fallowed, that part which in t
previous courſe of huſbandry was ſown with wheat, comes
rotation to be ſowed with barley, by which procedures t
ſame kind or ſort of grain is only produced every ſixth ye
The foregoing is the beſt practice of the common fields up
this deſcription of ſoil, but it is too frequently infringed up
by ſelf-intereſted or ſhort-ſighted farmers, or thoſe who a
preparing to depart from their occupations, and too large p
tions of land are ſown with wheat and oats, ſo that t
rotation of cropping upon ſuch land, comes round every th
year, by which procedure and the repetition of the ſa
kind or ſorts of grain (and thoſe of the moſt impoveriſhi
natures) the ſoil becomes exhauſted and foul, and thus
(but moſt particularly) thin ſtapled ſoils, are rendered unpr
ductive, and cannot be brought into their former ſtate of f
tility, under the beſt mode of common field management fo
ſeries of years.

It is a common practice, to make open water furrows,
ſuperficially to drain this deſcription of land, when crops

corn are ſowed, or in the firſt ſtages of their growth, but attempts of the like nature are very ſeldom made at other ſeaſons, from which neglect, the fineſt particles of manure, mucilage, or food for plants, are waſted or waſhed away, and the cells of the plants are rotted, and conſequently their tubes are either waſted or deſtroyed. The like inattention prevails with reſpect to the draining of the commonable land, appendant upon ſuch common fields, from which circumſtance, not only ſimilar effects in a ſmall degree are produced with reſpect to the loſs of manure, and delay of the vegetation, but the deſtruction of cattle depaſtured thereon is but too frequently produced, and particularly the rot in ſheep, a diſorder about the immediate cauſe of which, although the ſkilful are apt to differ, yet all agree, that it is moſt likely to be contracted in wet ſeaſons and ſituations, where water is partially confined upon graſs land in furrows, and other low places.

Land of the foregoing deſcription (*i. e.* of a clayey nature) whether in a ſtate of arable or paſture, has been evidently ridged up for a ſeries of years upon a falſe principle of draining 'till the tops of the ridges for ſix or eight feet acroſs are the only profitable parts of the ſoil;—the land next to, and the furrows form ſo many pools, ditches, and reſervoirs of water.

To level haſtily, land thus accumulated into heaps, would be a means of bringing ſo much dead earth upon the ſurface, that an occupier's intereſt in the whole of the land would be very materially delayed for three, ſix, or nine years, a circumſtance as to delay of intereſt which would ill agree with the condition of an occupier for only a round of cropping *. There are but few inſtances in this county where the arable

* It may not be here improper to remark, that the occupiers of common field farms, as tenants at will, are entitled to hold poſſeſſion for a round of cropping, according to the number of ſeaſons, upon this ſort of land (where it is farmed in three years) and an ejectment will not lie upon the common notice to quit at the end of a year.

land

land is divided into four fields or ſeaſons, and where it is ſo circumſtanced, nothing like ſyſtem prevails, and the occupiers are generally at liberty to exhauſt the ſoil at pleaſure.

Upon incloſed arable and paſture of this deſcription, the ſame ſhort-ſighted, ſelf-intereſted, or injudicious mode of farming is frequently practiſed; repeated crops of white grain, a general rejection of the beſt mode of cultivating of green food, (ſuch as turnips, cole, or cabbages), from an idea of the land being too wet to produce either, or a general neglect in not properly preparing the land for their production, or in not ſowing or ſowing or planting them in due ſeaſon, and afterwards not properly hoeing them, and almoſt a total neglect of the following improvements, viz. The keeping the main ditches ſufficiently deep and open under the fences—The making funnels at the gateways—The competently conveying the water to a proper outfall—The properly plaſhing and then guarding the young ſhoots of the quick fences from ſheep—The hollow draining of ſprings and preventing the lodgment of water on the ſurface—The levelling of anthills—The cleaning the paſture land from buſhes and coarſe foul productions—The rolling it at ſpring and autumn with an heavy roller—The neglect of the drill-hoeing and dibbling-huſbandry, where theſe operations are reſpectively practicable—The applying of manure which ought (under the moſt profitable mode of occupation) to be laid upon the paſture land to the forcing white grain crops.

And laſtly—Where there is a mixture of arable or paſture lands in the hands of one and the ſame occupier, the not adopting ſuch a mode of occupying the arable part, by interweaving meliorating crops, between crops of white grain, whereby a part of the annual ſupply of manure might be ſpared from the arable to be laid upon the paſture, and thereby improving the whole of the occupation: Inſtead of which, it is a frequent practice that every atom of manure which can be ſcraped together is laid upon the arable to force white

ſtraw grain crops, which are produced as long as the ſoil will make any return for ſeed and labour, it then becomes weak, poor and foul, and the proceſs of fallowing is again reſorted to as the laſt reſource to reſtore it.

The paſture land not being manured is here devoted to every poſſible reduction of condition, the drainage is moſtly neglected, poached up in winter, and ſuffered to be over-run with ant-hills, buſhes, ruſhes and ſedge, and in many inſtances repeatedly mown.

Would a valuer of eſtates do juſtice to a landowner who was about to ſell his property, if he was to conſider ſuch land with reſpect to its *preſent condition only?* or as to ſuch reaſonable and practicable improvements of which it might be capable?—Much leſs on a contemplation of ſuch improvements ought thoſe to be rejected, or laid aſide, which can eaſily be brought about without any extraordinary labour or expence.

MIXED SOIL, GRAVELLY, CHALKY, AND LIGHT LOAMY SOILS.

THE common fields of theſe deſcriptions of ſoil are generally underſtood to be divided into three, and in a few inſtances four, parts or ſeaſons, and here turnips are ſown upon conſiderable parts of the fallow land, which are ſucceeded by barley ſown with clover, which clover remains one year for a crop, and is ſometimes ſaved for ſeed, and the fourth crop is generally wheat; but where there are but three fields, the crop of clover is conſidered as a breach crop inſtead of beans, peas, or oats, and the land which produces clover, is in ſucceſſion fallowed, and that apportionment intended for barley is firſt ſowed with turnips; but theſe practiſes are not purſued ſyſtematically; the occupiers not being generally confined to any particular modes of farming, follow ſuch methods as ſeem to promiſe them the moſt immediate gain, without any direct view to the future. The major part of the occupiers in each pariſh being tenants from year to year, or, for a round of cropping, and not having any permanency in the occupation of the ſoil, or from other cauſes, want an incitement or encouragement towards the introduction of improved agriculture, which can only be inſpired by judicious leaſes enforcing the moſt approved practical huſbandry, brought about by the ſeparation of the preſent combined, and mixed ſtate of the open common fields, common meadows, commons, and waſte lands, by means of dividing and incloſing. Whilſt the preſent mode of occupying the ſoils remain, both the ſpirit for, and the means of exertion are dormant, nor are the occupiers ge-

nerally advocates for an alteration of the property by means of incloſing and dividing it, for if they can get their bread in their preſent mode of farming, they are apprehenſive that they might not do more in caſe a general alteration of the condition of the property was to take place, not being acquainted with the improved agriculture which ought to take place upon an incloſure; and from a prejudice generally grafted in their minds againſt innovations, or alterations, they do not readily change into new ſyſtems of farming, even where the benefit of example is immediately before them; unleſs the very condition of their holding is interwoven with the beſt practice which can be adopted, and ſecured by means of leaſes properly drawn in conformity with improved huſbandry (before alluded to) and vigorouſly carried into execution under the ſuperintendance of competent agents.

A general neglect of agricultural improvements in the letting of farms, and in the general unſkilful mode of raiſing rents whenever the meaſure is ſet about, has brought the farmers to apprehend that whenever theyſhall diſcover a ſpirit for improvements, and in any degree put them in practice, a ſpeculation would be made upon their exertions, and thus they might pay a ſecond time for their improvements. The conſequences attending the mode of raiſing rents (before alluded to) may be thus explained.

The tenant's holding being from year to year, or for a round of cropping, of courſe they cannot be ſaid to have any permanency in their reſpective occupations, and in ſome inſtances are thus kept in conſtant jeopardy. If a few flattering ſeaſons preſent themſelves, they are led to expect an advance of rent, and except in tenancies under ſome old, noble and reſpectable families they are ſeldom baulked in their expectations, and whether ſuch additional rent is a light or an heavy burthen, the farmers are led to conſider it as ſo much wreſted from their hard earnings. No material improvements or profitable alterations of the property being ſuggeſted on

the part of the land-owner, whereby the occupier might be benefited or amply repaid; and it is a matter of accident that it was not heavier.

A little more rapacity on the part of the land-owner, harder hearts, or ſofter heads on the parts of of the ſurveyors or agents employed, might have made it intolerable. A repetition of the like conduct in the land owner drives the occupier to deſpair, deſtroys all confidence on his part, and every degree of ſpirit being thus repreſſed, the tenantry carry on the buſineſs of their occupations as if they were conſtantly under notices to quit: In vain may the land-owner iſſue forth his aſſurances that if hard times ſhall come and the produce of the land be thereby reduced in value, the rents ſhall be lowered; to carry this idea to the fulleſt extent or to the hinge upon which the evil turns, it is keeping the tenantry in a galling ſtate of dependance, and preventing them from every poſſibility of enriching themſelves by extraordinary labour, diligence, and ſkill, or by the expenditure of their hard earned modicum in improvements, from a want of a permanency in the ſoil and a certainty of being reimburſed with intereſt and advantage by means of leaſes.

The land-owner need not apprehend that by granting leaſes of his property he relinquiſhes any of the gentlemany appendages, and conſequence attached to the poſſeſſion of land, for when the courſe of huſbandry and every neceſſary and practicable improvement ſhall be pointed out for ſo long as the demiſe ſhall continue, the leaſes may be made voidable by either party giving ſix months notice to the other. The ſpirit of improvement is not altogether to be inſpired by the length of the term of a leaſe,—the leaſe may be made for a ſhort term very deſirably, if the allowances for the tenant's improvements are liberally conſidered when he ſhall quit poſſeſſion; for inſtance—the leſſor paying the leſſee (in caſe he gave him notice to quit) certain ſtipulated allowances for ſuch improvements which may have taken place ſince the

commencement of the term;—and in caſe the leſſee gives the leſſor notice that he ſhall quit the poſſeſſion, certain matters and things of courſe muſt be performed by him agreeable to the original ſtipulations.

A plan of this ſort for ſtrengthening the aſſurances between landlord and tenant, and for promoting improved agriculture, though ſhort of the utmoſt good that might be obtained from proper leaſes, yet in particular caſes would be infinitely more beneficial than the preſent ſlovenly, looſe, and unproductive mode of occupancy, by which the land-owner, the occupier, and the community are every day ſuffering very conſiderable loſſes.

In a diſtrict ſo large as the county of Bedford there is certainly a diverſity of management both with regard to the intereſts of landlord and tenant, and inſtances may be adverted to where the land-owners are noblemen and gentlemen of the firſt fortunes and higheſt reſpectability, purſue a line of conduct extremely ſteady and liberal towards their tenantry, and on the other hand inſtances occur where the occupiers approach nearer towards perfection than in others, nevertheleſs but a ſmall part of the land in this county is managed in conformity to the moſt approved modes of agriculture which have long been practiced in the beſt cultivated counties upon ſimilar ſoils.

The incloſed eſtates of the laſt mentioned deſcriptions of ſoil are generally managed in a manner proportionably unproductive of advantage with the common fields, and the only benefit they appear to derive from their ſtate of ſeveralty is the readineſs with which they may be improved on account of ſuch ſeveralty only; the occupiers not having been bound to improved agriculture have not adopted the drill, or dibbling, or hoeing huſbandry, nor any regular ſyſtems of cropping the land, producing ameliorating crops, interwoven with white grain, thereby keeping up the heart and good condition of the ſoil independent of foreign aid.

The properly fallowing, cultivating and hoeing turnips, or other green winter food for cattle and ſheep, ſuch as cole or rape, and cabbages, and ſowing artificial graſs ſeeds with the ſucceeding crop of barley to remain laid down therewith for one or more years *, are objects in the purſuit of which the majority of the Bedfordſhire farmers are near a century behind Norfolk and Suffolk. The ſoils upon the management of which I am now remarking, are the moſt profitable under judicious management, and the reverſe when improperly treated.

Upon a due inveſtigation it will be found, that theſe ſoils are ſeldom to be found clean, or even made ſo by the progreſs of fallowing, which buſineſs is here made ſubſervient to all other occaſional buſineſs upon a farm; in the improved counties, all other buſineſs is ſubſervient to it, and where it is conſidered as the foundation of the whole and each part of the ſucceeding courſe of huſbandry.

Turnips are but indifferently hoed, or the cultivation of them generally neglected, ſo that 20s. to 3l. may be ſaid (upon a moderate calculation) to be annually loſt upon all the green egetable winter crops, for want of due attention and management: inſtead of the land being laid down with the firſt crop of ſpring corn with good artificial graſs-ſeeds for one or more years in order to bring it to a turf, before it ſhall be again brought into a ſtate of cultivation, it is often ſown with a ſecond, and ſometimes a third crop of white grain, and with ſuch ſecond or third crop in ſucceſſion, red clover and rye graſs is often ſown, thus the land becomes poor, foul and conſequently unproductive, and when brought into that ſtate it is impoſſible but by means untried and unknown in this part of the country to get it into heart, for here, the chief dependence is upon the common ſtable or fold-yard manure,

* The ſowing rye, tares, &c. upon the ſtubbles intended for the ſucceeding fallows for ſupport of ſtock in the moſt trying ſeaſon of the year, which is that immediately after turnips, cole, or cabbages are exhauſted, and before the natural or artificial graſſes are ready.

which decreaſes in the ſame ratio as the land declines in its product.

The benefit to be derived from a judicious application of marle, clay, or lime, are, as I before obſerved, generally unknown, the plodding upon the ſuperſtratum of five or ſix inches content the occupiers, they rarely ſearch into the ſoil deeper, and for want of a permanency, a fixed term of years or competent aſſurances in their occupations, they have no ſpirit to adopt expenſive improvements, in the reſult of which, whatever benefits might preſent themſelves, they are apprehenſive that the land-owners would reap the moſt material advantages:

I am as great an enemy as any man to the racking up the rentals of farms beyond a fair yearly value, and wherever the beſt mode of agriculture is adopted and the beſt and moſt ſuitable ſtock of cattle and ſheep are produced, or in other words wherever any given ſpot is made as productive as it can poſſibly be, the land-owner ought to be careful that he does not require a greater rent than the occupier can live well under and pay with chearfulneſs, reſerving the intereſt of his money employed in buſineſs at leaſt, and a fair gain for his ſkill and perſonal exertion. It is the groveling, prejudiced, unſkilful, obſtinate farmer that I point at, who rents his land at half the real value, and therefore exerts but half his induſtry, great part of which is employed in endeavouring to conceal from the land-owner or his agents the real ſtate of his property, and who carefully turns his face aſide from any improvements leaſt his landlord ſhould reap a part of the ſucceſsful advantages to be derived from them.

Here a field preſents itſelf in which a judicious ſurveyor, or agent, may exerciſe his ſkill, judgement, and integrity, to the advantage of both landlord and tenant, as well as that of the community, by pointing out the various means of improvement of which the reſpective ſoils are capable, giving the tenantry the power of carrying them into execution, and a

ſecurity

ſecurity in a competent term to be allowed them, or aſſurances equal thereto, whereby they ſhall reap the fruits of their labour, and uniting the intereſt of the landlord and tenant for their mutual benefit with a view to an improvement of the inheritance in the land, making the ſoil produce the utmoſt it is capable of, thereby promoting the general good of the community.

COMMONS

COMMONS IN PASTURE.

THERE are not any extenſive commons of this deſcription in the county, and thoſe which remain, are mixed with, or appendant on the common fields, and are held according to the antient ſyſtem of farming, as neceſſary for the depaſture of of ſheep, in order to fold upon the arable common fields.

INCLOSURES.

FROM the ſtatement I have already made, of the large quantity of land, yet remaining in a ſtate of common and arable fields, common meadows, and waſte lands, it muſt appear, that very little land has been incloſed of late years; every pariſh which is commonly underſtood to be open, conſiſts of a certain portion of antient incloſed land near the reſpective villages, but that proportion, compared with the open common fields in each reſpective pariſh, does not on an average exceed one tenth of the whole.

COMMON FIELDS.

Of late years ſeveral common fields have been incloſed, but ſuch pariſhes have not been ſelected for that purpoſe, with a direct view to improved agriculture; for in ſeveral inſtances, incloſures have been made of ſome of thoſe common fields, of which improvement is the leaſt certain, being a thin ſtaple of ſoil upon very ſtrong loamy and clayey land, whilſt in ſeveral inſtances, the ſame proprietors of ſuch common fields were alſo proprietors, or much intereſted in the improvement of other open common field pariſhes of mixed ſoil, and light loamy natures, the improvement of which, by means of incloſing, would have been certain.

I muſt confeſs myſelf to be at a loſs to account, for this extraordinary delay of public and private benefit, and I can only further obſerve upon it, that moſt of ſuch incloſures, muſt have been brought about, from motives not ſtrictly combined with views to improved agriculture.

In but few inſtances, have we ſeen improved ſyſtems of farming, adopted upon the new incloſures which have taken place, and except Lidlington, the property of the Earl of Upper Ossory; Sundon, the property of Sir John Buchanan Riddell, Baronet, and Potton; it does not appear, that any regular ſyſtems of farming, were laid down upon the incloſing of land, or have been ſince purſued upon it; but it has been a practice for the perſons who were the tenants in the open field ſtate, to take the new incloſed land at a conſiderable advance of rent, without any knowledge of or view towards improved agriculture, and ge-

nerally without any ſalutary reſtrictions as to management, or any example or encouragement towards good huſbandry. No wonder that ſuch tenants purſued proſpects of immediate gain, without any view to future advantage; the land was cropped ſucceſſively with the moſt exhauſting crops, it became poor and foul, and ſuch proceedings have brought the meaſure of incloſing very undeſervedly into diſrepute in this county.

The town of Bedford is chiefly ſurrounded by common fields, the ſoils of which are of the moſt improveable nature by means of incloſing, whereby the barbarous practices of the common fields might be aboliſhed, and the ſoil applied ſucceſsfully to the purpoſes of improved cultivation. On account of the vicinity to the town, the land might be laid down in paſture and applied to the ſupport of trade and commerce, nevertheleſs the inhabitants are under the neceſſity of travelling over the arable common fields, now let at from 12s. to 18s. per acre, to incloſed paſture land in other pariſhes, at a much greater diſtance, and of leſs intrinſic value, where they rent it from 2l. to 3l. per acre; and other inſtances of a ſimilar nature might be adverted to.

NEAT CATTLE.

THE cattle bred in this county, are for the moſt part of a mixed kind, differing, according to various mixtures, from the Holderneſs, Lancaſhire and Leiceſterſhire to the Alderney ſorts, and as it has not been a general practice, to attend nicely to the breeding from the beſt of any particular ſorts, we find them of a very inferior nature, but moſt particular with regard to their intrinſic value of feeding for beef, *after the firſt intention for the dairy is over*, a circumſtance, which it is preſumed ought to be weighed by thoſe breeders, who are deſirous of making the greateſt profit from their occupations. We generally find them large in their heads, bones and bellies, and coarſe in their horns, throats and necks; narrow in their hips, plates, chines, ſhoulders and boſoms, and high in their rumps; and conſequently, wanting that due width and ſymmetry of body, which carries with it the inherent aptitude to become fat, with a ſmaller portion of nutritious aliment, in a much leſs time, than would be required to render others marketable. From animals of the foregoing deſcription, therefore, much leſs profit is derived to the grazier, than might be fairly computed upon, were more attention paid to the breed of cattle than at preſent. A conſiderable quantity of land, in the ſouthern part of the county, is uſed for dairies, and butter is from thence conſigned for the London market. In the middle and northern part, there is not ſo large a portion of land applied to the maintenance of cows as in the ſouthern part, and that which is ſo applied, is divided between the dairy, and ſuckling calves for the London market, as well as for home conſumption. The butter made in the ſouth part of the county, is generally much

ſuperior in quality to that made in the central and northern parts, which I attribute to the degree of attention neceſſary to be paid to the manufacturing it for the London market, for unleſs it was ſent thither in a good ſtate it would not be ſold. Butter is now conſidered ſo much an eſſential neceſſary of life, that a daily demand for a certain quantity muſt conſtantly preſent itſelf, and if the quantity being of a good quality is inſufficient to ſupply that demand, ſuch as is of an inferior quality generally finds a market, and on this account it is very rare, except in gentlemen's houſes and ſome few farm houſes where the women are remarkable for their cleanlineſs, to find any butter of the beſt quality either winter or ſummer. A general inattention to cleanlineſs, in making the dairies receptacles for meat in its different ſtates, and various other family productions, greatly tend by their effluvia, to taint the milk and cream, to which may be added, the neceſſary labour and attention, in the not daily ſhifting the cream into ſcalded clean veſſels, and in not churning often enough. It frequently occurs, that the cellars and dairies in ſmall farm houſes are one and the ſame place—I recommend, that in the conſtruction of farm houſes, the dairies ſhould always be placed in ſhaded ſituations, and applied wholly for ſuch purpoſe, and free from the effluvia of the farm yards. If the managers of large families, and inhabitants of towns, poſſeſſed reſolution enough for a few weeks, to reject all the butter offered to them, that was not perfectly ſweet and good, a certain reformation would be made, in the wholeſome and palatable qualities of this article of conſtant conſumption.—But few calves are reared, and thoſe made fat for veal, are generally of a very nice quality, and ſent up from Bedford and many other towns in the county, killed and dreſſed in proviſion waggons, for the ſupply of the London market; a reformation in this article I conſider to be very practicable. It but too often occurs in the courſe of a ſummer, that in very wet or tempeſtuous weather

ther, the Thames becomes the receptacle of large quantit
of meat thus conveyed to London, by which circumſtan
not only the intereſts of the parties immediately concern
but that of the community are deeply injured. I ſhould
commend an experiment, of making the bodies of proviſ
waggons, to convey in the ſummer ſeaſon the calves alive
London, whilſt a frame might be conſtructed over them, up
which to place hampers and baſkets of leſs periſhable pro
ſion.

SHEEP.

THEY are generally of a very unprofitable quality, but more eſpecially thoſe bred in the common fields, where the proviſion intended for their maintenance, is generally unwholeſome and ſcanty; it is impoſſible to give a deſcription of any particular ſort as the general breed of the county, becauſe jobbers are conſtantly driving various ſorts from fair to fair, and ſelling them in the different counties, and from the undrained ſtate of the commons and common fields, the ſtock of ſheep depaſtured upon them, is but too frequently ſwept away by the rot; and it being abſolutely neceſſary, according to the preſent ſyſtem of farming, that their places ſhould be conſtantly ſupplied with others for the folding of the land, under ſuch circumſtances of caſualty and neceſſity, the healthineſs of the animal when purchaſed, is the firſt and almoſt the only object of conſideration with the farmers, with that view, ſheep are purchaſed by them of any country and of any deſcription, the horned and polled are mixed together, and as a pretty general deſcription of them I may venture to obſerve, that they are coarſe in their heads and necks, proportionably large in their bones, high on the leg, narrow in their boſoms, ſhoulders, chines and quarters, and light in their thighs, and their wool is generally of a very indifferent quality, weighing from three to four pounds per fleece. A few exceptions may be made to this deſcription, in the ſheep at Goldington, St. Leonard's, Ickwell, and a few other places, but generally ſpeaking, upwards of nine tenths of the ſheep of the common fields of the county, are of this deſcription.

The

The ſheep bred upon the incloſures, are generally of a much ſuperior quality, being for the moſt part a mixture between the Lincolnſhre and Leiceſterſhire ſorts, but they are not equal to the moſt perfect of either kinds, though very uſeful and profitable.

The weathers are generally ſent to market from the incloſures when ſhorn twice, called *two ſhear*, and are ſold when very fat at from 35s. to 40s. per head. Their fleeces generally weigh from ſeven to nine pounds each.

His Grace the Duke of BEDFORD, is making ſome very deſirable experiments, in the comparative value of the different kinds of ſheep, which will require ſome time, to reduce to that degree of critical accuracy, which a ſubject of ſo much general importance deſerves.

Perhaps upon the republication of theſe obſervations, the public may be favoured from his Grace with ſome account of them.

Mr. BENNET, a farmer at Tempsford, upon the great north road, 52 miles from London, is poſſeſſed of a breed of that kind of ſheep called the New Leiceſter, which do infinite credit to his judicious choice and perſeverance to obtain, and it will require a very nice degree of judgment, to diſtinguiſh them, from thoſe produced upon the land of ſome of the firſt breeders in Leiceſterſhire.

From the experiments already made, upon the production of this truly valuable animal in this kingdom, and from the obſervations I have been enabled to make, the New Leiceſterſhire breed, ſtands in the faireſt light for pre-eminence, the ſmallneſs of their bones and offals, the width of their carcaſes, the abundant fineneſs of their fleeces, docility of temper, perfect ſymmetry of body, uniting with every other circumſtance which can render them in the higheſt degree profitable, poſſeſſing that inherent quality of becoming fat with a much leſs portion of aliment than is requiſite to keep alive ſheep of a contrary deſcription.

WOOD LAND.

THE improvement of this ſpecies of property, has not been much attempted, and it does not appear, that any material experiments have been made, in order to aſcertain the comparative advantages to be derived, from the cultivation of different kinds of timber and underwood, or in ſelecting ſuch ſorts as are beſt adapted for the moſt immediate uſes of the country. The woods or woodlands, conſiſt chiefly of oak timber and any kinds of rude underwood, that, by chance, may ſpring up under it, ſo that it is not unuſual, to ſee thorns produced, where a more valuable crop might be cultivated; it not being an object of general attention at every fall of underwood, which is cut at about twelve or fourteen years growth, either to root out ſuch productions as are the leaſt profitable, and to fill up the vacant places with a better ſtock. It is not unuſual, to obſerve in the woods, conſiderable quantities of land, either quite vacant, or producing a ſmall crop of any thing; indeed ſo inconſiderable is the crop of underwood, in the eſtimation of ſome perſons who have had the management of woods, that inſtead of felling the neceſſary timber at the time the underwood is cut, they have returned years afterwards to cut more timber, throwing it down upon ſuch of the young ſhoots of the underwood as were produced, which, if a tolerable crop, would be greatly injured by ſuch means, and alſo by the conveying it away.

The moſt profitable mode of managing wood-land, in my opinion, is to cultivate a regular quantity of ſuch kinds of

timber and underwood together, as may be beſt ſuited to th
ſoil, ſituation and circumſtances of the country where it ma
be produced. By this mode, the preſent generation, as we
as poſterity, will be benefited.

This laſt mode of managing wood-land, appears to me t
have been generally neglected, and of late years, an object
leſs conſideration in rural œconomy, than any other improv
ment. In the reign of HENRY the Eighth, we find ſever
very ſalutary laws enacted, to prevent abuſes in the manag
ment of wood-lands; probably ſuch attention of the legiſl
ture, might have been excited, by a general ſpirit for cleanſi
the ground of wood for cultivation, under an apprehenſio
that by converting ſo much wood-land as was then intend
to the purpoſe of agriculture, the neceſſary timber for t
ſupply of the navy would be too much diminiſhed. Fro
whatever cauſe ſuch reſtrictions proceeded, the framers
them appear to have had a juſt idea of the beſt mode of cul
vating wood-lands; by fixing the quantity of ſtandrills
be left at every fall of underwood, it clearly appears to m
that the cultivation of underwood was conſidered as a fix
object of profit, whilſt the quantity of timber intended to
cultivated in ſucceſſion, appears to be the preciſe quanti
that might be raiſed in the moſt healthy and flouriſhing ſta
without injuring the progreſs of improvement either in t
underwood or timber, it being compatible with the raiſi
timber of ſufficient height, and preſerving to it that quant
of ſpace, branch and foliage, ſo neceſſary for the admiſſion
air, and the attraction of water and nouriſhment from the
moſphere, for its health and ſupport.

IMPROVEMENT

IN

TIMBER AND UNDERWOOD.

THE firſt thing which claims our attention is, a due inveſtigation, whether land, which is now uſed for the production of timber, is moſt profitably applied to ſuch purpoſe, under a due conſideration of the nature of the ſoil, and its local ſituation and circuſtances? The ſecond, whether ſuch timber is adapted to the ſoil upon which it is produced? I am of opinion, that all land of an high quality, viz. from 18s. to 25s. per acre, might be moſt profitably applied to the purpoſes of cultivation; the advantages to be derived from an annual rent, produced from corn, graſs, &c. with its accumulating compound intereſt, will in a term of years, neceſſary for bringing a crop of timber to perfection, produce a much larger ſum than can be reckoned upon it.

Various calculations have been made, upon the probable advantages to be derived, from the cultivation of oak timber; but ſuch calculations are wholly founded on conjecture, as the probable term of human exiſtence falls ſo far ſhort of that length of time, which is neceſſary to bring this plant to perfection, upon ſoil the beſt adapted for its production, that regular, periodical, and competent obſervations, in particular inſtances, are loſt or hidden from our enquiries.

It is difficult to ſet apart any ſpot of land, as beſt ſuited for the production of oak timber, which has not already produced it, becauſe ſo much depends upon the ſubſtratums of ſoil, through which the tap root ought to find an eaſy progreſs, in regular approaches towards perfection, and any inequalities, by means of ſtony or hard bodies, which it may meet with in any ſtage of its growth. I am of opinion, that all land of an high quality, that is to ſay, from the yearly value of 18s. per acre and upwards, might be moſt profitably applied to the purpoſes of cultivation, the advantages to be derived from an annual rent produced from corn, graſs, &c. with its accumulating compound intereſt, will, in a term of years neceſſary for bringing a crop of timber to perfection, produce a much larger ſum than can be recovered upon it.

Particular inſtances have occurred, where a large quantity of timber has been produced in high perfection, where the trees have been very thick with but little foliage; but it has been in thoſe ſituations, where the ſoil is extremely deep and rich, making amends for the excluſion of a very conſiderable part of the atmoſpheric nutriment, which, on ſoils leſs fertile is abſolutely neceſſary to be imbibed by the plants for their health and ſupport. If the oak has ſpace for its branches to expand themſelves, fifteen trees, containing on an average from 80 to 100 feet of timber each, will cover an acre of ground. And unleſs, as in the caſe before ſtated, the trees have ſufficient room for the expanſion of their branches their growth will be impeded in proportion as they are cramped. Thin ſtapled clays of a low quality, ſuch as are found in the weſt part of Huntingdonſhire, and the high parts of Cambridgeſhire, and north parts of this county, now let under ten ſhillings per acre, are probably well adapted for the production of timber and underwood; and, upon the poorer cold ſoils of this county (though the quantity is ſmall), timber and underwood ſhould be continued where found, and in

proved on land where it is planted, and ſimilar ſoils might be converted into wood-land to great advantage.

It is impoſſible that timber and underwood can be any where raiſed, upon a given ſpot, in a mixed ſtate, in as large quantities, and to as much perfection, as they might be ſeparately; yet a very conſiderable head of timber, may be raiſed in ſucceſſion, with a good crop of underwood; and I conſider this to be the moſt profitable mode of employing ſuch land, by which means, the preſent generation as well as poſterity may be benefited, and the land thus made much more productive than it would be, by the ſeparate cultivation of either timber or underwood, becauſe the ſuperſtratum may be fully employed in raiſing the moſt valuable crop of underwood; being that for which the ſoil is adapted; an advantage, which may probably be found applicable, to the neceſſities of the country where it ſhall be produced, and of a much higher net annual product for rent, than would be made of the land in any other mode of occupation; whilſt the ſubſtratum is productive of a ſucceſſion of timber of conſiderable value. I cannot cloſe this remark without obſerving, that the mode in which ſome gentlemen permit their woods to be managed, is not the beſt that can be deviſed. I recommend that foreſt officers, ſtewards, agents, and woodmen, ſhall have regular fixed ſalaries, and that they ſhall not conſtantly have it in their power to take advantage of their own wrong doing, for according to the preſent mode in ſome inſtances adopted, in the falling and converting timber, it is cuſtomary for them to take part of the property in bark, topwood, &c. &c. or poundage as perquiſites of office, upon the ſale of it; and therefore, whilſt the quantity annually to be cut is limited, and ſuch officers are removed, it is their intereſt not to cut down ſuch trees as are mature or decaying, but otherwiſe the moſt thrifty ones, which would, according to the beſt modes of employing the land, pay moſt for ſtanding longer, as they will conſequently produce moſt bark, top or lopwood, and poundage.

FOLDING

FOLDING SHEEP.

If the neceſſity for the meaſure of incloſing common fields, commons, and waſte lands, and erecting competent conveniencies for farming the lands when incloſed, in central ſituations, required any additional argument to thoſe which have been commonly uſed—it might be adduced, from the univerſally acknowledged neceſſity, of folding ſheep upon a portion of ſuch land annually; whereby in almoſt every ſituation, where this barbarous practice is adopted, the occupier throws away a much larger intereſt, in the want of improvement in his ſheep, than he gains by the manure he derives from their folding.

Wherever a ſoil is found ſo poor, that it will not by being incloſed, and having farm houſes placed in central ſituations, under a courſe of huſbandry beſt adapted to the ſoil, afford animal and vegetable manure, in ſufficient quantities, to keep it in good heart, without folding ſheep upon it, I recommend its being thrown out of every agricultural view, and planted with that ſort of timber, for the production of which it may be beſt adapted.

DAIRY FARMING.

THIS mode of employing land, is of all others the moſt impoveriſhing, and more eſpecially upon cold or wet land, with a clayey bottom, or where the ſuperſtratum is in any degree retentive of water, becauſe the poaching of the cattle, when the land is in a wet ſtate, is extremely injurious to it. The neceſſity that there is alſo, for annually mowing a conſiderable portion of it (at leaſt one-third) for the ſupport of cattle in winter, to reinſtate which no manure can be afforded, is the ſureſt means of reducing the value of the land. The only ſituation in which a dairy can be ſupported to advantage, is upon an incloſed farm, conſiſting of at leaſt one-third arable, where the ſtraw-yard, or offals of turnips will maintain the barren cattle, and the cows producing milk may be ſupported upon turnips, and a portion of hay, as the circumſtances of the occupation and neceſſities of the caſe will require; but even in ſuch ſituations, two-thirds of paſture land, ſhould be alternately ſtocked with ſheep, and ſuch beaſts as will eat off the coarſe herbage.

FENCES.

NOTWITHSTANDING the great care, attention, and expence, which is commonly employed in raiſing new quickſet fences by the proprietors of eſtates, how common a circumſtance it is, to ſee them afterwards totally neglected, or what is worſe, deſtroyed by ſubſequent bad management.

They are frequently ſuffered to grow too long before they are plaſhed, and when plaſhed, to have live ſtakes left in them, which afterwards ſhoot out like pollard trees, whereby a conſiderable part of the young ſhoots, which ſhould proceed from the ground, are thus mounted on ſtilts, the hedges become thin at the bottom, and conſequently, in a ſhort ſpace of time, ſheep and other ſmall animals creep through them.

The mode of cutting them is generally improper; indeed the whole ſyſtem of plaſhing is badly performed, for in the firſt inſtance, the ſtems of the quick are generally bent down and hacked nearly through, and laid into the hedges, which lets the water into the roots and decays them; they ought otherwiſe to be cut off at the bottom of the ſtem with ſharp inſtruments, by ſtrokes directed upwards, whereby the bottom of ſuch ſtems would be left ſmooth and ſloping to ſhoot off the water. It but too often occurs, that after ſuch plaſhings, the young ſhoots are not properly protected from the biting of ſheep and other animals.

I recommend, that whenever at 12 or 14 years growth, or at any times when the bottoms of the ſtems of quickſet hedges

become thin, and loſe their buſhy productions, they ſhould be wholly cut up in the manner before deſcribed, and competently hedged or protected from the biting of cattle or ſheep. It will but ſeldom occur, that the buſhes ſo produced will do more than afford the means of hedging and defending the young ſhoots, until they are paſt being injured, &c.

Where ſuch productions are incompetent, I recommend the uſe of ſtrong ſhifting hurdles, a good ſtock of which ſhould be provided by every farmer for this and various other uſeful purpoſes.

RABBIT WARRENS.

THIS mode of occupying land, is very little practiſed in this county, and is chiefly confined to two or three pariſhes, where the production of the ſilver grey rabbit, is not attended to as in ſome parts of Lincolnſhire, the fur of which ſort is of a much higher value than that of the common grey rabbit.

PARING AND BURNING.

THIS ſpecies of management is but very little practiſed in this county. Indeed I know but one eſtate upon which it is now adopted, and there it is very limited in its extent. I obſerved that the land pared and burnt in the preſent ſpring is ſowed with barley, the worſt of all poſſible management.

In the Fens where this practice moſt prevails, the production of a green vegetable crop immediately after burning, is a common and a better practice; but here the farmer ſets out with an exhauſting crop, and there is no doubt of his going on with the ſame management, as long as a white ſtraw grain crop can be produced—then when the ſoil ſhall become poor and foul, fallowing will be reſorted to, as the only poſſible remedy, the manure ariſing from the crops ſo forced, will be applied to the forcing ſimilar crops upon other land, until the whole will be quite exhauſted at one and the ſame time, and then the means of reſtoring the ſoil to fertility, will be completely out of the farmer's power.

If the practice of paring and burning ſhould at any time be abſolutely neceſſary, in order to get rid of a variety of coarſe productions, which cannot be ſubdued by any other means, (a circumſtance which can hardly ever occur upon high land), I ſhould recommend it ever afterwards to be abandoned, as a practice highly prejudicial to both the intereſts of landlord and tenant, for that ſoil which is already too light, requires not aſhes to be mixed with it, the ſureſt means of making it

lighter; that ſoil which is already too thin or ſhallow, requires not to be ſubtilized with fire, the ſureſt means of reducing its quantity. The aſhes produced from burning the turf, are generally of a very forcing nature, and unleſs the ſoil upon which this practice is adopted, is frequently impregnated with large quantities of dung and mucilagenous ſubſtances, it ſoon becomes exhauſted, and after a few years and the ſecond ſtage of putrefaction has taken place, the effect produced, is the creation of ſalts of but little or no effect, or if they have any effect, they are hurtful to vegetation, and by this means the ſoil becomes a mere *caput mortuum*.

HORSES.

THE breeding of horſes is not a practice in this county worthy of particular obſervation, but few are bred except thoſe deſigned for pleaſurable uſes.

The farmers teams are chiefly kept up, by yearling and two-years old colts, brought by dealers from the Fens of Huntingdonſhire and Lincolnſhire. Some farmers practice the ſelling off their cart horſes for more valuable purpoſes to profit at 6 or 7 years old, but the practice is not general. In the ſouthern part of the county, where the farmers keep a road team to carry the produce of the land towards London, and to bring back London manure, ſuch as ſheeps trotters, horn ſhavings, rabbits and fowls dung, &c. &c. ſuch teams are kept very high, and of courſe at a very great expence; and I am of opinion (and which will be hereafter more particularly ſhewn), that the farmers returns do not compenſate for ſuch extra expence.

I recommend that every farmer ſells off his working horſes according to the purpoſes for which they are beſt adapted, as they riſe to ſix and ſeven years old, and to ſupply their places with young ones. Upon a moderate calculation, in reſpect of the horſes employed upon an arable farm of 200l. per annum, for a term of twenty-one years, the difference between keeping a ſtock of horſes conſtantly improving and thoſe declining in value, is at leaſt 1000l.—A ſimilar mode of ſelling off cows, or feeding them at ſuch ages, would produce a proportionate benefit to the dairy-man or farmer.

FINES ARBITRARY, HERRIOTS, &c.

I recommend upon all incloſures and diviſions of landed property, and in every other caſe where practicable, the enfranchiſement of copyhold eſtates, from arbitrary fines, herriots, &c. for whilſt the lord of a manor is entitled to two years improved value of them, upon the death of a copyhold tenant, or on the alienation of the property, particular caſes every day occur, to prevent the tenants from expending their property in the improvement of them.

THE

THE ROADS.

THE public roads of this county, are generally ſpeaking in a good ſtate, but in ſome particular inſtances might be improved; the materials are for the moſt part good, and pretty regularly diſtributed.

The new roads are thrown up too round in the firſt inſtance before found materials are laid upon them, by which procedure, the materials are much the thickeſt in the horſe-path, and the ſtrongeſt of them roll off the ſides; there ought to be in the firſt inſtance a vacuum left in the middle of the road to depoſit the ſtrong materials in, as in the following figure:

If the Commiſſioners of the public roads were not only to cut down trees and clip hedges, but prevent trees being injudiciouſly planted by the ſides of them, they would promote the public good.

The private or croſs country roads are generally much neglected, and of courſe in a very bad ſtate.

IMPROVE-

IMPROVEMENTS.

THERE are no ſocieties inſtituted for the improvement of agriculture. The tenantry, who, for the moſt part, are occupiers from year to year, have no incitement to exertions of ſkill. The open ſtate of the property, deprive them, in a great meaſure, of the means of carrying improvements into execution; and at any rate, they want a certainty or ſecurity, by means of leaſes, for being reimburſed the expence of any improvements that might be conſidered practicable; and they in general are fearful of ſhewing any inclinations towards improvement, leaſt a ſpeculation ſhould be made in an untimely, unqualified, and unjuſtifiable advance of rent.

The only means of exciting a general ſpirit for improvements, would be, by granting leaſes under regulations to enforce the moſt approved methods of agriculture, which are adopted with ſucceſs upon ſoils of a ſimilar nature, for gentlemen of extenſive landed property to ſhew the way, by undertaking the occupancy of parts of their eſtates, under the beſt practical ſyſtems of Norfolk, Eſſex, Hertfordſhire, &c. &c. and the choiceſt breeds of cattle and ſheep to be found in England, rejecting experiments for a time, or leaving it for the active zeal of agricultural ſocieties.

ON

THE USE AND ABUSE OF LEASES.

THE gentleman of landed property, who ſhould make a reſolution not to grant any part of his eſtate upon a leaſe, would commit as great an error as he who grants the whole in that way. There are but few eſtates that are ſo circumſtanced as not to admit of improvement—few on which an occupier of abilities might not lay out a conſiderable part of his property, for the ſake of future advantages to his landlord as well as himſelf; on this account it is reaſonable, that he ſhould be ſecured in his expectations as far human foreſight will allow, and this is moſt effectually done by a leaſe. Though a gentleman's word may be as binding to him as his bond, his ſucceſſor is not bound by it; therefore a farmer cannot be expected to lay out his money, which is often the dependance of a family of children, upon the uncertainty of an occupation from year to year. Such gentlemen as are determined not to grant leaſes at any rate, nor to give ſuch aſſurances for the permanency of the occupier's intereſt as may be relied upon, muſt be content to let their eſtates beneath their real value, and neglect many uſeful improvements, which would tend to their own, the tenant's, and the public advantage.

It is not an unuſual thing for men of experience, to find eſtates which are let much below their real annual value, in a much worſe condition than thoſe which have been improved in point of yearly rent. We may fairly take the counties of Norfolk

Norfolk, Suffolk, &c. for the examples in this reſpect, where a reaſonable and proper advance of rent, with the leaſes of the property drawn out for the mutual advantages of landlord and tenant, giving the occupiers the means of uſing the ſoil to their utmoſt benefit, without abuſe, has tended to the extreme opulence of the farmers. It is but reaſonable, under ſuch circumſtances, that the ſoil ſhould bear a rent, to enable the owner of it to purchaſe its product, according to the progreſſive decreaſe in the value of money.

Where an eſtate is let according to its yearly value, a leaſe is as neceſſary to ſecure a landlord's intereſt in the premiſes as the tenant's. Where a farmer occupies land from year to year, particularly arable lands, if he is ſelf-intereſted, indolent, or injudicious, a farm may almoſt imperceptibly become impoveriſhed before any alarm is taken; indeed ſuch farms often fall into the proprietors hands in the moſt wretched condition. I have frequently heard gentlemen of landed property complain, that they are conſiderable loſers by farming; and it may reaſonably be accounted for, ſince the land uſually comes into their hands in a reduced ſtate, and in that caſe, let who will be occupier, two or three years rent muſt be ſunk to reſtore it.

Rent is an annual ſum paid by the tenant to the landlord, without dimiſhing the value of his property; and when the value of an eſtate is reduced by a bad or injudicious occupier, it cannot be called rent, but ſo much deducted from the real worth of the poſſeſſion. Proprietors of land do not all of them conſider this matter in a true light; and when they can advance the annual income of their eſtates, conſider it as rent, whilſt the property is often ſuffering in an equal proportion to the annual ſum received during the demiſe, in at leaſt an equal meaſure.

There are particular ſituations where long leaſes are unneceſſary and improper, eſpecially when farms conſiſt wholly of rich paſture land, which will admit of no improvement; or

farms lying near to gentlemen's ſeats or parks, where a diſagreeable neighbour for a term of years would be a great inconvenience. But if gentlemen forego their own intereſt and that of the community, by not granting leaſes, becauſe it may poſſibly be imagined that ſuch tenants would become independent of their landlords, they are much miſtaken; for when leaſes are properly drawn, it muſt always be highly to a tenant's prejudice to offend his landlord; fortuitous circumſtances ever produce ſome indulgence to be ſolicited from a landlord; even exacting rent on the day it becomes payable, would be an inconvenience which many tenants could not bear. All farms ſhould be let upon agreements, whether for one, or twenty-one years, in a judicious manner, as near as poſſible for the mutual advantage of landlord and tenant, always preſerving the value of the land; at leaſt, wherever agreements or leaſes are not made with ſuch views, or directed to ſuch ends, it would be better that no ſuch leaſes or agreements ſubſiſted: though the value of the land would be likely to be diminiſhed, yet abuſes would not be ſo ſpeciouſly practiſed, as when they are admitted by ſtipulated terms, reciprocally eſtabliſhed between the proprietor and his tenant: Of this deſcription are the common precedents of leaſes, handed down from one attorney to another, from a period before any improvements in the ſcience of agriculture were adopted.

I cannot take leave of this ſubject, without recommending it to all gentlemen of landed property, as well as perſons deſirous of hiring farms, to be cautious that farmers do not take more land than their circumſtances will admit of ſtocking, improving, and managing to the greateſt advantage. Though the ill conſequences attending ſuch practices both to landlord and tenant are flagrant, yet they are but too frequent, by which procedure many very induſtrious farmers have been ruined, and many eſtates undeſervedly brought into diſrepute.

NEW PLANTATIONS.

In the weſtern part of the county, the Earl of UPPER OSSORY, and FRANCIS MOORE, Eſq. have, within the laſt twenty-five years, made ſome very conſiderable improvements, by planting light ſandy land with trees.—Their plantations conſiſt chiefly of mixtures of the fir tribe, and it appears, although in the outſet, ornament engaged a conſiderable ſhare of their attention, that ſuch plantations have turned out extremely profitable. Mr. MOORE has made ſome experiments upon the comparative value of the different ſorts of plants, which he will doubtleſs communicate, with pleaſure, to the Board of Agriculture.

I am of opinion, from the obſervations I have been able to make, that the Larch Fir is the moſt deſirable tree to plant for profit, upon land of the foregoing deſcription, in this county.

His Grace the Duke of BEDFORD is planting and beautifying many hundreds of acres of barren and waſte land, in the neighbourhood of Woburn Abbey, which is laid out with great taſte, and, I doubt not, will turn out, in every reſpect, beneficial.

Lord CARTERET has raiſed ſome very ornamental plantations, near his ſeat at Haynes; and I am of opinion, that when the improvements, his Lordſhip is carrying on, are complete, nothing will remain upon his eſtate to be performed, which art can effect.

The practice of pruning timber and other trees, at various ſtages of their growth, is very prevalent in this county, as well as the making pollards of timber and timber-like trees. Whenever a tree, at any ſtage of its growth, has its branches lopped off, the body of it receives injury in a more or leſs degree, and, in proportion to its age and growth, it decays; but another injury, of no leſs conſequence, is occaſioned by robbing the trees of their branches and foliage, whereby the means of ſupplying them with moiſture and nouriſhment is diminiſhed. The injury is proportionably leſs, when practiſed upon very young trees; but, when timber, or timber-like trees, that have acquired thirty or forty years growth, ſuffer amputations, they immediately begin to decay, and when any very conſiderable quantity of branch and foliage are lopped off, ſuch trees become bark-bound and ſtunted, and never more regain their former vigour. It may not be improper to remark, that every tree imbibes moiſture from the atmoſphere, impregnated with vitreous or other particles of manure, which greatly tend to nouriſh the plant; and if the foliage and branches, which ſerve to imbibe and conduct the moiſture, thus impregnated with nouriſhment, to the root, where, according to the intention of nature, it ſhould exſude or depoſit a competent ſtock in reſerve, are cut off, the means by which it ſhould be ſupplied are thus crippled and diminiſhed, decay of health is the conſequence, and the plant ever afterwards is unthrifty and ſickly.

It is very extraordinary, that in the preſent enlightened days, we ſhould but too frequently obſerve the ſame hand, which is induſtriouſly employed in planting and watering a tree, afterwards deſtroying it, by pruning off its branches, and leaving a mere ſprig on its upper branch, with only a few leaves upon it, merely to denote it is not quite deſtroyed. The moſt ſucceſsful mode of planting trees, is to produce them very thick in the firſt ſtage of their growth, and afterwards to thin them judiciouſly at different periods, by which means, the trees will throw out very few branches on the ſides of their ſtems, and

they will be carried up, if the ſoil is genial to their growth, to the moſt deſirable height. The ſuperfluous branches of young trees, are beſt rubbed off with an hedger's glove, in the ſeaſon in which they are thrown out. Crooked timber is very deſirable for particular purpoſes in the conſtruction of ſhips; and if his Majeſty's foreſts will not, according to the preſent mode of managing them, ſupply it with timber, it may be trained to grow crooked, to anſwer the ſpecified purpoſes for which it is required.

Thoſe who cut off the tops of timber or timber-like trees, to make them what are commonly called pollards, have no excuſe whatever to plead. This abominable practice generally originates with neglect of the quickſet hedges, which, when fallen into decay, muſt be ſupplied by dead ones, and in order to procure the neceſſary materials, the farmer aſcends the neighbouring trees, to lop off the neceſſary materials; and in order to ſecure a conſtant ſupply of hedging ſtuff, he cuts off the leading branches, and afterwards claims the ſucceeding crop as his own.

ON

THE PRODUCTION OF BEES-WAX AND HONEY.

THE means of producing the greateſt poſſible profit that can be derived from ſoil, cannot be completely purſued, until the production of honey and wax is fully attended to. Upon a moderate calculation, in which I have been aſſiſted by Mr. WILDMAN, of Holborn, a perſon, who has made this ſpecies of profit his particular ſtudy for many years—every ſquare mile in Great Britain, would produce in thoſe articles, on an average 100l. ſterling in value, admitting that an increaſe of product would reduce the price of thoſe articles. But ſuch an increaſe in the quantity of bees-wax, would conſequently tend to render the importation, not only of thoſe articles, but of tallow, unneceſſary to the preſent extent. The value of theſe articles, on this ſtatement, far exceeds the idea of the moſt ſanguine friend to the proſperity of the country. There are in England alone, 49,450 ſquare miles, and in Scotland 27,794—total 77,244; which at 100l. per ſquare mile, would produce 7,724,400l. per annum. At only 20l. per ſquare mile, the produce would be 1,544,880l. This is an object well worth attending to, being in addition to every other profit derived from the ſoil.

If we examine the various purpoſes to which bees-wax is applied, it will, amongſt others, be found to be uſed in va-

rious

rious manufactures, in chirurgical and veterinary healings, and various family purpoſes. It is an article, in which luxury would be at a ſtand, unleſs it ſupplies the elegant and polite with light, to tread in almoſt all their nocturnal mazes, it aids in the conſtruction of dreſs, and even the ladies apparel is impregnated with it. The medicinal uſes of honey are univerſal; it is a luxury upon the table, and the beſt of all ſubſtitutes for butter and ſugar; and when the fineſt particles are extracted, the refuſe being properly converted into wine, when it becomes of a proper age and quite dry, is not inferior to the beſt of foreign white wine.

THE BEE.

THE advantages agriculture would derive from multiplying this induſtrious animal, are not few. By means of their induſtrious purſuits, in roving from bloſſom to bloſſom, the chives, or male parts, with more expedition and certainty, impregnate the pointels, which often, without ſuch operation being expeditiouſly forwarded by ſuch means (under a ſuſpenſion in the want of air, or in conſequence of violent rains), the ſeed is waſhed away before the intention of nature is performed, and the plants remain unfruitful.

THE

SWINE.

THIS animal, is not generally produced in as high perfection in this county, as in many others. The introduction of the beſt ſorts from Berkſhire or Hampſhire, would be a very conſiderable improvement.

POPULATION.

THERE not being any manufactures in this diſtrict deſerving notice, agriculture is the only means of occupation; but from the unincloſed and uncultivated ſtate of the country, and the little employment and encouragement given to the huſbandmen, in reſpect to conſtant work throughout the year, the labourers continue with the farmers during the winter ſeaſon, to thraſh out their grain, and on the approach of ſummer, many of them ſet off for more cultivated counties, where labour is more required; whereas, were a proper ſyſtem of huſbandry introduced, theſe labourers would have conſtant employ in their own neighbourhood, and the number would be annually increaſing. There is a ſcarcity of comfortable cottages for the poor in this county; and the farmers are more ſtudious to prevent this very neceſſary claſs of men from making ſettlements among them, than to provide them uſeful and profitable employment.

THE

THE UNDERWOOD

Is not carefully ſelected and planted; the production of it, both in quantity and quality, is, for the moſt part, left to chance.

OAK TIMBER.

This ſpecies of wood is not produced in large quantities in this county, except upon the eſtate of his Grace the Duke of Bedford; nor is there a regular demand for that ſupply which the county affords; although there is a navigable river running to its centre. It is commonly purchaſed by jobbers in large lots, who generally convert it to any purpoſes by which a quick return can be had, with ſome immediate gain, and no ſcrupulous regard to the converſion of it to the purpoſes of ſhip building is had, a circumſtance deſerving of the attention of thoſe moſt intereſted in the ſupport of the navy.

IMPROVEMENTS

IN THE

AGRICULTURE OF THE COMMON FIELD

THE property of this deſcription may be extremely impro by being properly divided and made ſeveral; but a queſ always ariſes in the minds of the judicious, whether the vantages of any given plan, will exceed the expence of rying it into execution. If we examine the common fi which are the ſubject of this enquiry, we ſhall find, tha the moſt conſiderable part, proprietors who have a prop in many hundreds of acres in any pariſh, have not more two or three acres at moſt connected together; the reſ lies in acres and half acres, quite disjointed, and tenants der the ſame land-owner, croſs each other continually in forming their neceſſary daily labour. A general exchang lands in the reſpective pariſhes would be a very deſirable ject, in caſes (if they can poſſibly exiſt) where a genera cloſure and diviſion could not take place, ſo that each m property would be allotted together in large parcels; by procedure, at leaſt a moiety of the occupier's expence cultivating the ſoil might be ſaved.

General diviſions and incloſures of the common field the only means of promoting the good of the country t

utmoſt, by means of which each proprietor will have his property in a contiguous ſituation; he will be enabled to apply the ſoil to its right uſe, (that is to ſay, the arable land to paſture, and the paſture to arable, as can be beſt turned to his advantage), to introduce the beſt ſyſtems of agriculture, which are particularly adapted to different ſoils, to effect a competent drainage, to promote the growth of timber, to bring about an arrangement of tythes ſo highly deſirable for all parties intereſted in the ſoil and its productions. And it may be here obſerved, that the Biſhop of LINCOLN has, with very great prudence and judgement, ſuggeſted a regulation for a commutation of tythes in his dioceſe (of which this county is a part) when common fields are incloſed, which is found to anſwer ſo well, that it is to be hoped it will be every where adopted. By this plan, the money payments for tithes, vary according to the price of corn from time to time, a procedure equitable towards the land-owners and occupiers, and highly ſecure for the clergy, becauſe it prevents the abuſes which too frequently have befallen the intereſt of the clergy, in conſequence of the miſmanagement of the allotments which have been made to them of land, given in lieu of tithes: for it cannot be ſuppoſed, that gentlemen, bred up merely in ſcholaſtic purſuits, are always competent to let the land they receive, ſo as to preſerve the permanency of its yearly value. It is with pleaſure I add, wherever this plan has been carried into effect, it has been attended with the deſired ſucceſs. Thoſe who may be deſirous of obtaining further information upon this ſubject, may conſult the regulations in the Act of Parliament lately paſſed, reſpecting the incloſing of Milton Bryant, in Bedfordſhire, and Tealby, in Lincolnſhire.

Incloſed land, managed to the greateſt advantage, ſtands not in need of being folded with ſheep when in a ſtate of fallow, by which procedure the produce of the paſture land is laid upon the arable, to which, according to the old ſyſtem, no return of manure can be made; for under an improved ſyſtem of huſ-

bandry, every part of the farm ſhould be under ſome ſpecies of crop, and fallow totally aboliſhed, except in theſe inſtances; where there any pyrites, metallic, or ſulphurous qualities in the ſoil, in which caſes, being pulverized and turned up to the air, with a proper dreſſing of lime, are the only remedies; but where the drilling and horſe-hoeing huſbandry are purſued, the latter operation ſufficiently looſens the ſoil, and opens the way for the fibres of plants to obtain proper and neceſſary nouriſhment.

To introduce every argument which might be urged to prove the ſalutary effects of incloſing commons, common fields and waſte lands, would far exceed the limits of my preſent plan, or the neceſſities of the caſe.

It has been obſerved, by thoſe who are prejudiced in favour of ancient cuſtoms and methods, that ſome incloſures have not anſwered the expences attending them; but when we conſider the plain truth of the matter, it will be found, that miſmanagement and abuſe in the mode of bringing about the meaſure, as well as the carrying it into effect, has been the true cauſe of the ill ſucceſs which may have ſometimes attended it.

Whoever apprehends, that the occupiers of common fields, are neceſſarily tied down to any preciſe mode management, by the cuſtom of any pariſh, are groſsly miſtaken; for each occupier is only under an obligation to the others, not to break up any of the commonable land, to ſet apart the regular field or apportionment of fallow, to open his ditches and water courſes; not to ſuffer the thiſtles and weeds to be ſeeded upon his neighbour; and to ſtock the field according to the practice of the pariſh. In all other matters he may drive the land, force it totally out of heart; firſt, by negligence in fallowing, and next, by ſowing wheat upon all his fallowed land, which ſhould be divided between barley and wheat, and in ſowing oats in ſucceſſion to wheat and barley, inſtead of beans or peaſe; and in all this miſmanagement, he does not infringe

upon his brother farmers. But it has frequently occurred to me in practice, that ſome of the occupiers of a common field, are purſuing the beſt poſſible mode of management the ſituations are capable of, whilſt others are reducing land, intermixed therewith, to the loweſt ſtate of poverty, beggary, and rubbiſh, making the reſpective value of the inheritance to vary three, four, or more years purchaſe; and upon the incloſure of common fields it frequently occurs, that commiſſioners are obliged to conſider ſuch worn-out land of conſiderably leſs value than ſuch parts as have been well farmed; of courſe, the proprietors, whoſe misfortune it has been to have their land badly occupied, have had a ſmaller ſhare, upon the general diviſion of the property, than they otherwiſe would have had, in caſe their land had been better farmed.

No drilling, hoeing, or dibbling is purſued in common fields; but in ſome inſtances, the ſheep are turned into the beans, to eat out a part of the weeds. But this is a miſerable ſubſtitute for properly hoeing, breaking the fibres of the plants, and occaſioning their throwing out freſh ones, thereby deſtroying weeds, moulding up the plants, and profitably employing and bringing up the infant poor in agricultural purſuits, of which the country ſtands much in need.

A well digeſted general bill, for the incloſures of commons, common fields, and waſte lands, would wonderfully operate towards the ſucceſs of incloſures, as it would be a means of ſaving a very conſiderable expence in the outſet of the buſineſs.

It ſhould form a material part of the duty of perſons employed as agents for proprietors, whoſe eſtates are incloſed, to prevent very expenſive buildings from being erected. A profuſion of money has been laviſhed upon uſeleſs buildings not requiſite for a due occupation of the land, and which is a heavy burden upon the proprietors and occupiers, without anſwering any good purpoſe.

It has been erroneouſlly inſiſted upon by ſome perſons, that certain ſoils are not adapted for that improved ſyſtem of huſbandry, which ought to take place upon an incloſure, in order to pay the expences attending it. Strong clayey land with a ſhallow ſtaple, it is granted will not admit of ſo much improvement as other ſoils, upon which green winter food may be produced in perfection, as turnips, cole, or rape ſeed, or cabbages; and where the drill huſbandry, under a proper courſe of ameliorating crops, (as peaſe, beans, and other pulſe, interwoven with a rotation of white grain crops, and artificial graſſes in ſucceſſion) are judiciouſly purſued, It is alſo certain, that mixed ſoil, light loamy, ſandy, and gravelly ſoils, if they are in a ſtate of common field, anſwer beſt to the proprietors upon an incloſure; ſuch ſoils having been farmed according to the ancient common-field huſbandry, are very weak, poor, foul, and unproductive. The quick repetitions of the ſame ſorts of grain, and the too frequently breaking and turning over the ſoil, already too light, tends to let the mucilage be waſhed away, and to eſcape the reach of the roots of the grain; which diſadvantages are to be remedied, in a great degree, upon an introduction of an improved ſyſtem of huſbandry. Strong clayey land, with a ſhallow ſtaple, may be very much improved by means of an incloſure, upon which a complete drainage may be effected, wheat, beans, artificial graſſes, &c. cultivated to perfection; thus promoting more abundantly the means of improving and ſupporting cattle and ſheep, and very much meliorating their water layer; and in many inſtances, on ſuch land green winter food may be produced, as cole, rape, or cabbages, where manure in pretty ſtrong dreſſings can be afforded for that purpoſe.

THE BREED OF NEAT CATTLE,

By means of a general incloſure, may be improved at leaſt 40 per cent. and ſupported upon the ſame weight of aliment as they are now.

The Sheep may be improved in their carcaſes at leaſt 10s. each, and in their fleeces three ſhillings per fleece, in like manner, and under the like circumſtances.

TIMBER AND UNDERWOOD,

Which derives its ſupport from below the ſuperſtratum of ſoil, and not dependent upon it, may, in many inſtances, be planted with great ſucceſs upon land which is of very low quality, for any of the purpoſes of cultivation.

Whenever underwood is cut, the ſorts ought to be particularly examined, and ſuch as are unproductive or unprofitable, grubbed up, and other ſorts planted in their ſtead; the ſame care ſhould be uſed in ſelecting, planting, preſerving, and cultivating timber beſt adapted to their reſpective ſoils.

IMPROVEMENT

OF

INCLOSED ARABLE AND PASTURE LAND.

THE application of ſoil to its right uſe, is a matter of the utmoſt importance to the kingdom in general, but more particularly to the landed intereſt. It will be found, upon due enquiry, that a very conſiderable quantity of land, which is now paſture, cannot be improved without its being firſt brought into an arable ſtate; and it will be alſo found, (though in inſtances more rare) that certain parts now arable, might be better applied to the purpoſes of paſture.

It certainly requires ſome judgment, to make the neceſſary diſcrimination, and to draw covenants between landlord and tenant, for the regulation of the ſyſtem, and due care muſt be taken to ſee them enforced. For want of competent judgment in perſons employed in ſuch concerns, or from neglect, abuſes have frequently happened, and ſelf-intereſted tenants have plowed up paſture land, without attending to any improvement; but on the contrary, have continued to crop the land with grain whilſt it would produce any, and afterwards it has fallen into the landlord's hands in a reduced ſtate; from ſuch circumſtances the proprietors became alarmed, and have rather preferred that their land ſhould continue in a ſtate of perpetual paſture, than that it ſhould be converted to arable,

under

under a riſque of its being exhauſted; and prejudice againſt the plough is ſo very ſtrong, that it is not unuſual to meet with perſons in the habit of acting as ſurveyors, who eſtimate the value of land, merely in proportion as it may be conſidered adapted for being laid down in paſture. I am confident that due proportions of paſture and arable land, beſt anſwer the purpoſes of an occupier; and according to the ſize of a farm, ſo ought theſe proportions to be laid out, by which means green winter food for feeding cattle and ſheep, and ſtraw for litter is provided; and manure ariſing therefrom may be afforded to be laid upon the paſtures, whilſt, by a judicious ſyſtem of agriculture, the arable land will, in a very great degree, ſupport itſelf in high condition.

It is no advantage for an occupier to be permitted to uſe the plough, unleſs he can have a ſufficient quantity of arable land, to carry him on ſyſtematically for green winter food, &c.

It is a common practice where plowing is permitted, to ſuffer tenants to break up certain portions of paſture land under agreements, to lay ſuch land down again for paſture at ſtipulated times, and then to break up other parts, ſuch land is generally impoveriſhed when it is laid down, and ever afterwards it continues unproductive in that ſtate.

Farms conſiſting wholly of paſture and meadow land, muſt neceſſarily be impoveriſhed, becauſe a certain quantity muſt be every year mown, and an adequate return of manure cannot be made for the injury done by the ſcythe.

Meadow land upon the banks of rivers, which may be occaſionally watered, and very rich paſture land in low ſituations, cannot be more profitably applied; but paſture land of inferior quality, and more eſpecially ſuch as has been injudiciouſly plowed, and improperly laid down, may be converted to more profitable purpoſes, by plowing, and introducing the improved ſyſtem of huſbandry; at leaſt a third of the produce of every acre of paſture land, as often as it is renewed, is waſted by the ſoil of the animals which depaſture on it. When gentle-

men of landed property ſhall attend more to agriculture, and graſſes ſhall be better underſtood, and the moſt valuable ſort ſelected, we ſhall have very little land permanently under paſture, ſuch graſſes will be cultivated in like manner to lucern, and cattle and ſheep will probably be moſt profitably ſtall fed; a practice intitled to conſideration and experiment. But whilſt any land is uſed as paſture or meadow, it ought to be improved to the utmoſt it is capable of, by levelling the ant-hills, draining, manuring, rolling, &c.

The beſt mode of levelling the ant-hills is, by cutting every third hill annually, and ſpreading its contents, and laying down the ſod upon its baſe, (provided it is of a good ſort of graſs, if not, to ſow graſs ſeeds theron), by which means the whole buſineſs will be performed in three years, and the land will not be overburthened at any time with too much dead ſoil. In other caſes it may be adviſeable, upon poor clayey land, to cut up the ant-hills and carry them off; or, in deſperate caſes, to plow the whole. Much depends upon the particular caſes, and a man of judgement will act accordingly.

Whether a farm conſiſts of land which has been long in tillage, or land converted from paſture to arable, the moſt approved ſyſtem of agriculture, beſt adapted to the ſoil, ought to be applied: which, conſidered in a general way, is, by keeping off ſucceſſions of white grain, (viz. wheat, barley, rye, and oats), to interweave meliorating crops alternately between crops of white grain; to drain, drill, hoe, weed, and preſerve each ſort; to lay down for a certain time with graſs ſeeds, ſuch parts as ſhall in any previous year have produced turnips, cole ſeed, or cabbages, with the next crop of grain, for one or more years. Thus ſtock of every deſcription may be improved to the utmoſt the ſoil is capable of maintaining, which will be beſt carried into effect, by an equal regard in ſelecting the beſt ſorts, and in the care which is taken in cultivating the means for its ſupport.

A ju-

A judicious agent can eaſily draw covenants adapted to every improvement the ſoil is capable of, giving the occupier full ſcope for doing well, and preventing him from injuring the property he occupies; and thus, the great objection of granting leaſes, without which no general improvement can be expected, is effectually removed.

IMPROVEMENT

IN

MEADOW LAND.

It has been already remarked, that the Ouze is the principal river which runs though this county; along its banks is a conſiderable quantity of rich meadow land, which is ſubject to be overflowed at all ſeaſons of the year. When the water comes down from Buckinghamſhire with any conſiderable rapidity, it frequently happens, that the crops of hay are either conſiderably damaged, or totally carried away. The water, which might be made a ſource of great advantage, is, in the preſent ſtate of things, an evil of no ſmall magnitude. A conſiderable number of water-mills are placed upon this

ſtream, which ſerve to increaſe the riſque or damage, and more eſpecially as the conſtruction of their wheels are not generally on the improved plan; and as there is no certain gauge or level generally obſerved, to which the water ſhall be held up, nor any poſitive laws enforced for throwing open flood gates upon the approach of an increaſed quantity of water—I propoſe, that either the water mills ſhould be taken away, or under a general or particular Act of Parliament, the river ſhould where neceſſary be widened, and embanked in a competent manner; that the land-owners ſhould have a power of taking water out of the river, at certain times and ſeaſons, to water the meadows, when it may be done with the leaſt injury to the mills; that all flood gates and waſte water ſhould be regulated in an efficient manner, ſo that in times of flood, or when the banks of the river are overflowed, the water may ſpeedily make its exit, without being in any degree dependant on the mills.

The expence of carrying this plan into execution would be inconſiderable, when compared with the advantages attending it. The ſoil which will neceſſarily be taken from the nooks and corners of the land, or from the ſides of the river, to widen it, in order more effectually to carry off the floods, will ſerve to embank it: and when this buſineſs is performed, the meadows may be drained where neceſſary; the crops of hay and eddiſh may at all times be preſerved; and the water, which is now the dread of the occupiers, may be made the ſource of a moſt invaluable improvement, by judiciouſly watering the land.

A tax may be laid upon the land thus to be improved, in proportion to the yearly value of the improvement, or of the mills to be taken away, or any other expences attending the plan, which will be but a ſmall drawback upon the advantages to be derived from an immediate improvement of the meadows, of perhaps twenty ſhillings per acre.

ON

IMPROVING THE SITUATION OF THE LABOURER.

COMFORTABLE habitations ſhould be provided upon every eſtate, for the induſtrious labourers who are employed upon it; and where it is neceſſary that any new erections ſhall take place, I would recommend, that they ſhould be placed contiguous to each other, from which circumſtance the conduct of each individual would be known to his neighbours; and giving each labourer a portion of land to ſupply him with eſculent roots, and (where neceſſary) with the means of maintaining a hardy cow, of the Scotch or Welch breeds; proviſions, thus made for the neceſſary labourers upon each eſtate, there would be no doubt of an increaſe of inhabitants, whoſe duty as well as intereſt it would be, to exert themſelves to the utmoſt of their power for the farmers at all ſeaſons of the year, whilſt the influence of the neighbouring magiſtracy would be a barrier againſt their being oppreſſed.

If theſe meaſures were to be purſued, and the farmers were provident (as is the caſe in Norfolk and Suffolk) to engage a competent number of labourers, mechanics, artificers, tradeſmen, and others, (ſome conſiderable time before harveſt) to aſſiſt in the neceſſary buſineſs of it, difficulties, loſſes, and extraordinary expences, would be in almoſt every caſe prevented.

CON-

CONCLUSION.

ON the whole, if under the patronage of ſo valuable an inſtitution as the Board of Agriculture, proper meaſures were ſpeedily taken for the improvement of the county of Bedford, there can be no doubt, that in the ſpace of a very few years the population of the county would be conſiderably increaſed, the ſituation of every individual in it would be materially bettered, and the kingdom at large would receive a very important acceſſion to its opulence and ſtrength.

THE END.

GENERAL VIEW

OF THE

AGRICULTURE

OF THE COUNTY OF

DERBY.

GENERAL VIEW

OF THE

AGRICULTURE

OF THE COUNTY OF

DERBY,

WITH OBSERVATIONS ON THE MEANS OF ITS IMPRO

BY THOMAS BROWN,

OF LUTON IN BEDFORDSHIRE.

Gt. Brit

DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGRICU
INTERNAL IMPROVEMENT.

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TO THE READER.

IT is requested, that this Paper may be returned to t
of Agriculture, at its office in London, with any addit
marks and observations which may occur on the perusa
on the margin, as soon as may be convenient.

It is hardly necessary to add, that the Board does
sider itself responsible, for any fact or observation c
in this Report, which at present is printed and ci
for the purpose merely of procuring farther informa
specting the husbandry of this district, and of enabli
one, to contribute his mite, to the improvement of the

The Board has adopted the same plan, in regard t
other counties in the united kingdom; and will be
give every assistance in its power, to any person wh
desirous of improving his breed of cattle, sheep, &c. or
any useful experiment in husbandry.

London, July, 1794.

INTRODUCTION.

To Sir JOHN SINCLAIR, *Bart. President of the Board of Agriculture.*

SIR,

WHEN I had the honour of receiving your commands, to draw up an Account of the present State of Agriculture in the County of Derby, and the Means of its Improvement, I flattered myself, from what you informed me, that I should receive much assistance from the well known abilities of a Gentleman, whose local knowledge of the district would have rendered the task much less arduous. This Gentleman being very much engaged during the time I spent in Derbyshire, I could not obtain more than an hour's conversation with him; yet, in justice to his politeness, I have to acknowledge, that he rendered me every service and recommendation, which the short time he had to spare could possibly lead me to hope for.—Under this disappointment, I look to the indulgence and candour of the Board of Agriculture, as well as to that of the gentlemen and yeomanry of Derbyshire, to forgive every inaccuracy, misinformation, or omission, that a stranger must be liable to in executing the agricultural survey of a county.

In treating on this subject, I have endeavoured to follow the instructions of the Board, by giving the present state of Agriculture in the description of—The nature of the soil—The climate—The manner in which the land is possessed—The manner in which the land is occupied—The manner in which the land is employed—The rotation of crops—Grasses cultivated—Species of stock; under which I have mentioned, 1. cows, 2. sheep, 3. horses, 4. hogs—Irrigation—Grains principally cultivated; and under this head I have mentioned, 1. chamomile, 2. the practice of fallowing—Implements used in husbandry; as, 1. ploughs, 2. harrows, 3. carts, 4. waggons—Draught horses and oxen—Seed time and harvest—Inclosures and commons—Population—Labour, and hours of working—Drains and drainage—Paring and

burning—Price of provisions—State of roads—State of buildings and farm-offices—Leases—Commerce and manufactures.

Under these heads, I have introduced such occasional remarks as occur to a person accustomed to husbandry in Hertfordshire.

My second object was the introduction of such miscellaneous remarks as occurred on my Tour; and these are principally confined to—Remarks on agricultural societies—Superabundance of and deficiency in provision—Exports and imports—Making cheese—Making whey-butter, and—Laying barn floors.

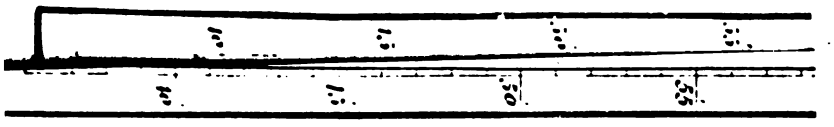
I have treated with much diffidence on tenures; in which I have mentioned the tenure of what is called the king's field; and—On tithes. In respect to these, and other subjects, I have barely hinted an opinion on the means of improvement; and with the same view I have given some thoughts—On the breed of cattle—On the management of soils, 1. in the fertile; 2. low peak; 3. high peak; 4. lime-stone soil; 5. grit-stone soil; 6. land capable of irrigation, or being converted to arable, meadow, or pasture; 7. soil that may be pared and burnt; 8. soil that may be planted;—and, in all situations, on the use and improvement to be made by leases.——The importance of the subject is admitted .——I have only to observe, that what I have done, the Board of Agriculture will please to consider as only a syllabus of what they have to hope from men of greater talents, of more leisure, and who have more local knowledge of the county. From those men I trust for candour in any remark they may please to make, assuring them, as well as the Board, that I should be extremely insensible, were I to omit acknowledging the civilities and attention which I received from the inhabitants of every denomination; and which I shall ever remember with gratitude and pleasure, and readily acknowledge my inability to render them that justice, the Board that service, and the subject that elucidation, which may reasonably be expected. I have the honour to remain,

SIR,

Your most obedient, and most obliged humble servant,

Luton, Bedfordshire,
July, 1794.

TH. BROWN.



THE SOIL.

Of the County of Derby is various, as nature in her most capricious mood could form:—to trace these variations in agricultural language, or to attempt to mark them accurately on a plan of about six miles and an half to an inch, are difficulties of which every one must be sensible. These difficulties, though great, ought not however to damp all attempts to investigation. Nature in her most capricious mood observes something like universal laws; and we find this county *demarked* by what she has thought fit to elevate and depress—high and low—hill and vale. These the natives of Derbyshire have (taking a general view of the county) long ago denominated High Peak and Low Peak, leaving the more fertile parts of the county undistinguished by either: so that, generally speaking, to make a distinction of soil, the county admits of three parts, which I shall (as an introduction to observation and improvement) call—the Fertile,—the Low Peak,—and the High Peak. It is however remarkable, that in all of these, nature has made some marked varieties in the nature of the rock with which this county abounds: the agriculturist distinguishes them by lime-stone and grit:—the nice discriminations of the chemist I shall leave for the improvements that are to be made whenever this work may be rendered of general use. Following these outlines, I have given two small plans of the county; on the one I have marked the principal roads, and on the other the principal rivers; choosing that marked with the roads for my own observations; and leaving the other for the observations of those gentlemen who have more local knowledge of the county, and are willing to assist this work. I have pursued the three leading features of the county, and these I have subdivided into lime-stone and grit; in the grit I have marked where coals have been discovered. I shall now attempt something like an agricultural description of each.

Fertile Soil——is not inaccessible to the plough; it consists

principally of a red loam on various sub-soils, approaching (in patches) nearer to marle, to clay, to black loam, to sand or grit, or to gravel, as may happen from the sub-stratum, or the atmospherical exposure; and these soils admit of other variations, from their proximity to springs, to rivers, or to stagnant water.

Low Peak——is more difficult of access, but in no instance inaccessible to the plough; it is however more strongly tinctured with quick transitions, but chiefly consists of drier sands or grits. The clays and loams here are in general more valuable (perhaps from being more scarce); and where they are not too much elevated, are certainly inviting for the husbandman to pulverize and subdue.

High Peak——is chiefly what the natives call a corn loam; this seems to me to consist of virgin earth impregnated with nitre on the mountains, and liberally poured down by them upon the happy vale. Where this corn loam is in sufficient quantity, and meets with a stratum of marle or clay, it forms a most desireable field for cultivation; but is ever overbalanced by the vast tracts of barren hills and mountains from which this soil is washed.

The sides of these mountains (forming a considerable part of the whole) present very little soil to view, being chiefly composed of rocks. Where the lime-stone forms the mountain (the flats on the tops, and where the sides are not too perpendicular for soil to lodge), the soil, though scanty, is productive of the finer grasses which form pasturage for sheep. Where grit-stone abounds, the soil in general approaches near to the nature of peat moss, in places forming vast morasses, retentive of water, and rendered dangerous for either man or beast to tread upon, except in dry weather; the surface presenting nothing but the barren, black moss, thinly clothed with heath or ling, and every where yawning out a dreadful rock.

In all these soils, very considerable alteration is made from the minerals of which the sub-stratum consists: but in conformity to my general plan, of only opening an introduction to what may be expected, when all hearts and all heads are united in improvement, and when every individual shall anxiously strive accurately

to describe and improve his own situation; I shall only remark, that during my tour I did not discover lime-stone, grit-stone, and peat moss, under the same surface; and thinking it material in the future improvement of great part of this district, to add lime and peat moss, mixed with every other substance that will add to the quantity of staple; and with this view I beg leave to hint, as matter for future investigation, that if lime-stone, coal, and peat moss, are ever discovered in contact, I should think this a favoured spot for trying the experiment, which I shall hereafter take the liberty to suggest, when I come to treat on *Hints for Improvement.*

CLIMATE.

From the description that has been given of the soil and situation, a faint idea of the climate may be inferred—in general it is wet and cold. The degrees of cold vary more than are easily conceived; and although I am sensible that our feelings are not the proper scale by which we are to form our judgment of the different degrees of heat and cold, yet finding mine so sensibly affected, I could not help remarking that in travelling from Sudbury to Ashborn I found a pleasing temperature: passing through Ashborn, in my way to Buxton (without any apparent change in the atmosphere), before I had left Ashborn three miles, I found an additional coat absolutely necessary; and this sudden transition is every where felt, on ascending into atmospherical elevation. The fertile part of the county is salubrious and temperate, though inclining to wet. The mountainous part is cold, enveloped in clouds, and during the winter months much incumbered with snow; but during my tour I was not fortunate enough to meet with any regular account kept of the quantity of rain or snow; nor did I hear of any meteorological journals being kept in any part of the county. I have long been of opinion, that to ascertain the quantity of moisture that falls, and above all the propor-

tion of time that the surface of any country is wet and dry, the hours of sunshine, and the hours of clouds, would in a great measure ascertain what the natural productions of the climate are, and fix some data for improvements in all situations. Every one may easily conceive the equal distribution of the sun's rays, when he considers that were it not for the intervention of clouds, vapours, and shadows, every spot on earth would be exactly half its time under the immediate influence of those rays; and must be equally sensible, that there are hardly two spots on earth (of an equal extent with this under investigation) that enjoy this blessing in the same degree. I trust I may venture to add, that the various productions of every climate, and of every county, as well as the cultivation and management of those productions, are greatly influenced by the obstructions the sun meets with; and as every place is capable of making a fair estimate of its natural advantages or disadvantages in this respect, I think it matter of curious and useful information, and of consequence as furnishing data on which hints for improvement may be formed. All that I could learn from local information on this subject, was, that at Chattesworth (situate between two mountains in the High Peak) the average quantity of rain is about one-third more than what falls in the vicinity of London. If any information, however, has been collected upon this subject, I trust that it will be transmitted to the Board.

THE MANNER IN WHICH THE LAND IS POSSESSED.

This county originally was in the possession of perhaps as few individuals as any part of the kingdom of an equal extent: we are told that at the time of the Norman survey, it belonged wholly to seventeen individuals; and some of the present possessions have lineally descended from those individuals down to their posterity, the present proprietors, but with considerable diminution

in point of territorial extent. The acquisitions of the church, under the Roman superstition, took considerable root in this soil; but the distribution of her property, after the suppression of religious houses, seems to have fallen into many hands. The enterprising spirit of trade, cherished by a wise and excellent constitution, established at the glorious revolution, has diffused those immense possessions, dividing the territory, and hiding what used to be the ancient gentleman in obscurity. But by well-concerted marriages, hereditary possessions are in many instances wisely preserved; and in the county of Derby we find some rent-rolls upwards of £20,000; several upwards of 10,000; many of more than 3,000—Those families possessing a rental of 1000 pounds, or under that sum (where there are not other resources), risking their estates in trade, and bringing up their children to manufactures and commerce; and (what is too often the case) wherever agriculture is clogged with difficulties which require property and talents, they carry that property and those talents of which they are possessed into trade; leaving the improvement of the soil to men of less property, and consequently of less power—Fatigued with trade, the mutability of the human mind, previous to the approach of old age, frequently drives men of this description to gratify a second change of sentiment, and search for something new in the sequestered vale; and every where we find small habitations decorated with plantations, on a confined scale.

THE MANNER IN WHICH THE LAND IS OCCUPIED.

From the general division of property, it is easy to conceive the distribution of land amongst occupiers in Derbyshire. The estates of the nobility are well arranged for occupation, having long ago acquired a basis founded on experience.

The intelligent steward readily discovers what are the requisites to enable the tenant to pay the most for such estates as he is con-

sulted in letting; and in all well regulated estates, we find the advantages of landlords and tenants (a principle I always insist upon as inseparable) mutually consulted—The particular manner of its being so, will hereafter be the subject of a subsequent chapter. The smaller landholder (provincially *statesman*), who has not a sufficient capital in stock, and is unwilling to part with his hereditary property, finds his mind distracted how to preserve his estate, as well as the rank his father held, and how to improve his fortune on rational principles. For want of property, and a regular system, men of this description wander into labyrinths, where, if not worse bewildered, we find them sitting down in obscurity, content with the produce of their land—to use their own phrase, "*Sitch* as God sent."

The tradesmen's estates (the bulk of their fortune being otherwise employed) are confined to small territorial possessions; perhaps from hence arose the numberless misfortunes which recently shook the vitals of this country; but where these estates exist on any tolerable scale, they are emblematic of what the face of this country would be, if farming was equally studied, and on as regular a system as trade; therefore, generally speaking, there are in Derbyshire farms of a sufficient size to occupy that capital which forms full employment for a farmer; much of the county, however, is occupied in rather small farms (under £100. a year) and by men engaged in pursuits distinct from improvements in agriculture:—men either pursuing the riches of mines; men employed in the mechanical operations of manufactures; or men labouring for the tradesman, and whose attention is more immediately engaged in the operative part of manufactures than in the improvement of the soil they occupy. There are, however, in this county occupiers of another description, very properly styled yeomen; men cultivating their own estates with a sufficient capital, or employing a considerable capital in the occupation of the ancient hereditary estates of the gentry; here we discover the dawnings of solid advantage to themselves and the community, they are reducing the theory of agriculture into practice, and the improvements and discoveries made by them,

(but of which I shall speak more particularly hereafter, under the description of cattle) are the sure experiments, tried and confirmed, which ought to excite every occupier of land in this or any other county, so far as local circumstances will admit.

THE MANNER IN WHICH THE LAND IS EMPLOYED.

This varies according to the nature of the soil; the circumstances of the occupier, and the nature of his tenure; and wherever there appears any thing like a regular system, as among the yeomen which I have described.

In the fertile part of the county, about one-third is in tillage, the remainder being old sward, or resting under artificial grasses.

In the Low Peak, a greater part of the land is in tillage, the pastures being poor, they usually have two-thirds in tillage, the other third being employed as pasturage for the dairy or breeding of stock.

In the High Peak, about one fifth of the inclosures may be arable, and this fifth part chiefly employed in growing oats; the remainder is in pasture, and the greatest part employed in dairy and breeding of stock.

ROTATION OF CROPS.

Good husbandry being rather partial, when compared with the whole of the county;—but wherever it is practised,—

In the Fertile Soil, the rotation of crops are, after clover or other artificial grasses, 1. wheat, or oats, 2. fallow, manured and limed for turnips, 3. barley, and laid down with 5lb. of red clover, 5lb. of Dutch clover, 5lb. of trefoil, and 2 pecks of rye-grass seeds.

The mixture is varied according to the experience and judgment of the farmer, and according to the nature of the soil; in the wet strong lands rye-grass is found to be a very great impo-

verisher of the land, but in the lighter red loams, it makes excellent pasture, where the land is stocked with a mixture of bullocks and sheep. In the stronger clays they fallow for wheat; a crop of beans succeeds, and then fallow the bean stubble. The impoverishing farmer will take several successive crops of white corn, of which oats will make two or three; and when worn out with cropping, will lay the land down with foul hay-seeds, and a mixture of artificial grasses; yet even under this cruel treatment, it is wonderful to see the efforts this soil will naturally make to recover itself. In one of the best managed farms I saw, consisting of about 200 acres, there are 55 acres arable, 40 acres mown for hay, 105 acres fed with cows, bullocks, and sheep,—one-third of the 55 acres is summer fallowed for turnips, cabbages, or clean tilth; (this gives full scope for the intelligent farmer to exercise his judgment, and consult the nature and circumstances of the land to be fallowed.) One-third is wheat, and one-third is barley or oats. With the barley the farmer sows grass seeds, under which the land is rested, and in the next year he breaks up an equal quantity of that which is grazed, where the artificial grasses are exhausted, and the land most in want of restoration by lime, manure, and cleaning.

The soil of this farm is mostly a red loam, some places wet and inclined to springs; here the judicious farmer soughs his land in the fallow season, and gradually reduces the height of the old original broad lands; depending upon the more efficacious method of keeping the land dry by the soughs; which he lays in such a direction, as by a proper declivity to scour themselves, and carry off all the springs and superabundant wet.

The stock on this farm (besides the stock in the yards) consists of 8 mares, kept for breeding and the cultivation of the farm, 80 store ewes of the new Leicestershire breed, the produce of these 80 ewes are kept till they are turned of two years old, at which age they are fatted and sent to the butcher; so that there are usually 100 lambs reared from the 80 ewes; and 100 shar-hogs, the produce of the preceding year. The neat cattle consists of 78 grazing beasts, cows, and heifers.

The stock on this farm, the abundant crops, and cleanness of the land, sufficiently denote the excellency of the management. The arrangement of the crops gives every opportunity to adopt the most rational method of improving the soil, without obstinately pursuing either the cabbage farming, the turnip husbandry, or exploding the use of clean fallows (all of which are certainly good husbandry in different situations), and steering clear of that little consequential pride with which the human mind is tinctured, and which frequently makes its appearance by preferring some specific mode of agriculture, either because it was practised by our ancestors, or because it is the "child of our old age."

In some parts of the Fertile Soil, we find the following rotation of crops, on breaking up the land after the natural grasses are exhausted, or become unprofitable, and as preparatory to its being relaid; 1. oats, 2. fallow, 3. wheat, 4. turnips, 5. barley; and again rested under artificial grasses; this, I think, has its advantages, as it gives the land two fallows instead of one, and introduces five seasons instead of three, between the breaking up of the worn out grasses, and relaying the land with the same mixture: one of the evils the cultivator of artificial grasses has to contend with is, that after repeated sowings, the land will tire of clover, or any other seed that is too frequently sown; and I believe it is an uncontroverted fact, that the seldomer any land is sown with clover, (and indeed I believe I may add, any other grass, corn, or grain,) the greater probability there is of success, both in the abundance and duration of the crop. In many of the lands that are not deemed too wet for grazing with artificial grasses, and are therefore kept for the more immediate production of corn, the following is not an unusual rotation of crops; 1. fallow, 2. wheat, 3. beans, 4. barley, 5, oats, and again fallow. Here I cannot be persuaded, but that any land that has long been under this rotation, may be improved by carrying off the superabundant moisture, and introducing green crops; confining my observations still to what I call the Fertile Soil, I have met with situations, where the following course of cropping is pursued,

1. oats, 2. fallow, 3. wheat, 4. barley, 5. oats, 6. beans, 7. turnips, or cabbages, 8. barley, 9. clover.

There may be some advantages in this mode; I fear they are all on one side, for surely wheat, barley, oats, beans, are bad preparatives for turnips or cabbages.

In the Low Peak, the most approved rotation of crops are, after breaking up where the artificial pasture is exhausted, 1. oats, 2. turnips, 3. barley, 4. clover, 5. wheat, 6. fallow, 7. wheat, 8. pasture. The introduction of a crop of clover, between the time of breaking up and relaying, and the two crops of wheat so near to each other, as well as sowing the seeds with a wheat crop, appears to me exceptionable: but the experience of intelligent men and facts, are stubborn things, when opposed to matter of opinion.

On the lands that are not rested as pasture, the common rotation after fallow is, 1. wheat, 2. oats, 3. pease. Here I am persuaded, that if the crop of oats were omitted, the pease would be a good preparative for turnips or cabbages, and by soughing this land, and introducing that crop, it would be highly improved.

On the better soils in this district we meet with the following rotation of crops, where lands are broke up with a view to improve and relay, 1. wheat, 2. oats, 3. pease, 4. barley, 5. clover; —or, 1. fallow, 2. wheat, 3. clover, 4. wheat, 5. oats, or pease.

Both of these rotations I think exceptionable, and if my experience in other counties, and the cursory view I have had of the nature of this land, can authorize me to suggest an improvement, it would be, after breaking up the exhausted artificial pasture, to sow

Oats.
Fallow for turnips, or cabbages.
Barley —— oats.
Turnips —— fallow.
Barley —— barley.

} Consulting the nature of the soil in the choice.

And with this crop of barley to relay the land with clover ——. and other grass seeds, suited to the nature of the soil.

And on land intended to be continued in tillage to

Fallow for turnips, or cabbages.
Barley —— oats.
Turnips —— fallow.
Barley —— barley.
Clover —— clover.
Wheat —— wheat.
Oats —— oats.

} Consulting the nature of the soil in the choice.

Or, according to the nature and condition of the land from the operations of the season, I would again turn the land to fallow after the wheat stubble.

Travelling farther north in the High Peak, we find hardly any thing like a regular rotation of crops; the quantity of land under tillage is comparatively nothing, on taking a general view of the county; oats, oats, oats, oats, (and alas, sour oat cakes!) a few potatoes, a little barley, and still less wheat, would be the food of the natives, did not their neighbours cultivate their land better than they do. Their mutton, however, is excellent, as I shall hereafter observe. At Hurdlow house I was obliged to partake of its genuine taste, for want of either bread or vegetable; or, "wait till the baker came." Here,

"Far as the eye could reach, no trees were seen,
"Earth clad in russet, scorn'd the lively green."

Stone walls, meagre inclosures, daring rocks, and a few miserable animals "sitch as God sent," are the only objects presented to our view.

I shall, therefore, dismiss this subject, till I come to speak of improvements.

GRASSES CULTIVATED.

From what has been said on the rotation of crops, it will appear that the broad-leaved clover, rye-grass, trefoil, and white clover, are the principal seeds sown for artificial pastures. Occasionally we find here and there the ribbed grass, or plantain, introduced.—The meadows produce all the natural grasses common to the soils and situations described.

SPECIES OF STOCK.

The number of recent inclosures, and the natural tendency of the soil to graze cattle, have greatly increased the quantity of meadow and pasture land; and this being chiefly employed in dairying and rearing of stock; the produce of the dairy forming the chief article from which the rents are made, the Derbyshire farmer very naturally turns his attention to

Cows.——I have already mentioned, that in Derbyshire there are some good and some indifferent farmers; in nothing do they differ more than in their opinion about cows; and in no part of their farming perhaps (in point of advantage) are they so nearly equal. The original breed of cows in Derbyshire appears to have been inferior in many respects even to those of their neighbours. These, in many parts of the county, are still held in estimation; but when compared with the new improved breed, are far short in excellence of shape and qualities, both as to the flavour of their flesh, and the facility with which they are fatted. To bring the idea to the conception of those who have not seen the difference, let them imagine the most awkward, ill-shaped, plodding hack, of eight pounds value, compared with the highest bred blood horse, who for his pedigree and excellence is esteemed a national treasure. The fine blood horse, however, differs from the fine bred heifer in this essential point:—In old age the horse is worth nothing; but through life, and to the extreme of old age, the cow is, in the language of the breeder, in all *situations*, and under *every* circumstance, always fat. Those who are not willing to allow that the *breed* of cattle is all that is necessary to make them fat, will however always find, that wherever this well-bred heifer has that pasture which will maintain any other heifer decently, she will do better than the old coarse breed; and it is an undeniable fact, that in the pastures of Derbyshire the true bred heifer will be fat, and fit for the butcher, while her companion of the "old sort" is little more than skin and bone. Much praise is due to Mr. Bakewell of Leicestershire for his indefatigable attention to this part of rural economy. Others, however, that are not so universally known, are not without their merits;

nor have their endeavours been without success in point of public utility. In Oxfordshire there is an instance of excellence that cannot escape public notice; and in this county, it is a pleasing reflection, that men of much eminence for enterprize and public spirit, have carried their researches and improvements to a height that entitles them to great consideration among the breeders and improvers of stock; and what promises the greatest stability to their fame, is, that not only farmers, but men of the first independency are engaged in this laudable pursuit. Improvements in stock seem to me in the first instance to have gone down the throats of "Sitch as God sent;" and to have made its appearance in the fat and well favoured kine. Through the animal kingdom there are clear distinctions between the blooming healthy families, and the lean and ill-favoured;—between the nicely proportioned symmetry of bone and muscle, and the cross-made and disfigured animal of every species: perhaps a nice observance of these qualifications gave rise to a preference so judiciously made by men of experience and skill. Though better soils, I apprehend, first produced these distinctions, discerned by men of skill, they produced the readiest sale and best prices at market; and we find originally that the Lancashire breed became eminent; the inhabitants of that district, perhaps, without being aware that they were liable to be rivalled, allowed their best breed to be picked by their more southern neighbours, who, more tenacious, for many years carried on the improvement, by what they affirm to be at this day a great secret, until they produced what is now called "the new breed;" some of which are endowed with a pedigree almost as long as that produced by Mr. Bannister in the character of Cadwallader—However, whatever merit there be in the pedigree, there certainly is intrinsic merit in this breed of animals; that they will fatten sooner than any other breed; and that there is less bone and offal about them than in any other sort of an equal size in the kingdom. They are easily distinguished, even in the dark, for there is a softness in the handling, that when contrasted with the common breed, is as different as the fine skin of the race horse to the coarse hide of a boar-stag. The merit of this breed of horned cattle, as grazers, I believe, in Leicester-

shire, Northamptonshire, Cheshire, and Lancashire, as well as most other grazing counties, stands uncontroverted. Besides the famous breed of cows in Derbyshire, we find others which not many years ago were held in great estimation, and among many of the old farmers are still esteemed (and perhaps very deservedly so) for the dairy. This cow is produced from crosses of the Lancashire, Warwickshire, and other breeds; and is what the Leicestershire breeders call the "old-fashioned sort." The merit of this "old sort" I am willing to bring to public view, by relating the following experiment, as it comes from a gentleman of unquestionable veracity:—that he has made seventeen pounds and a quarter of butter from a cow of this kind in seven days; that she was always healthy; but never shewed at any age much inclination to become fat; and that, at twelve years old, he sold her to the butcher at 12 pounds. This worthy gentleman goes on to remark, that nine Derbyshire cows of this breed were pastured with nine cows of the Holderness breed; the Holderness cows gave the greatest quantity of milk, but the milk of the Derbyshire cows was considerably more productive of butter and cheese.—I am sorry this gentleman has not favoured me with a comparison of the measure of milk, and weight of butter and cheese; an acquisition that would be highly gratifying, but must be left for marginal additions. The milch cows brought by the dealers to Derby market during the spring months, are chiefly of the Yorkshire kind, from the neighbourhood of Rotheram; this the Derbyshire farmers cross with a Derbyshire bull of the "old fashioned sort;" but the decided preference due to the bull of the new Leicestershire breed, is likely to root out the old-fashioned sort entirely; and more especially as some of the breeders of this new sort fairly challenge any other breed of cows to equal them in profit to the dairy, and certainly will excel them in grazing. It is matter of much controversy among the farmers in Derbyshire, whether this new breed of cows can be made equally productive in the dairy with any other species, and retain their decided superiority as grazers. If this can be accomplished, even the new Leicestershire breeders will be astonished themselves, and yield the palm to the Derbyshire cow. So far as my own experience

has gone, I confess this new breed of horned cattle may be called a new creation; but still more beneficial to the community would these new species of animals be, if the nutriment and fluids that pass through their organs could be directed into two channels at once, milk and flesh having hitherto been held to be incompatible. I believe the idea of their being incompatible is not altogether new, several unsuccessful attempts having been made some time ago. I intended to have annexed portraits of this breed; but understanding that there is to be a General Report on the different Breeds of Cattle in the Kingdom, beg leave to refer to that Report for further particulars. I shall conclude this description of the Derbyshire neat cattle with remarking, that I am told there are in the county of Derby, of this new breed, bulls that are deemed worth £300, and cows nearly that sum; to improve upon them, would perhaps be to put it out of the power of most men to enter upon a dairy farm; but in the High and Low Peaks, we find a useful little cow among the farmers and miners, which, with a small cross of the new Leicestershire breed, would in all probability suit their pasture better than even the highest breed we find in the Fertile Soil.

Sheep.——In the Fertile Soils we discover the new Leicestershire sheep more or less perfect, according as the goodness of land, the improvements and attention of the farmer, or other circumstances admit. These breeds of sheep seem to me to have had their rise from the same cause, and in the same way with the cows I have described; but as their origin and description belongs more immediately to the county of Leicester, and as I do not know of any particular improvement in them that this county is intitled to the merit of, I shall content myself with saying, that the wool of the shar-hog usually weighs between six and eight pounds; and to gain some idea of its value and goodness, when the finest short wools are worth 30*s.* per tod of 28lb. this usually brings about 24*s.*—The carcass is one continued pulp of fat, from the time of being lambed till it is slaughtered for the table, which is generally before, or soon after being two years and a half old: at this age, in Derbyshire, this sheep usually weighs from 30lb. to 40lb. per quarter, and is so fat, that a very moderate quantity of the

mutton will satisfy the keenest appetite.—I wish I could say as much for the flavour of this mutton, as I can for that I tasted without bread at Hurdlow house, which was of the small-horned sheep I meet with in the High Peak, on the moors and more barren part of the county, where the farmer usually keeps them to the age of five years, at which time they become valuable for the parks and tables of the gentry of this and other counties. I am aware that the new Leicestershire mutton has its advocates, and that in some instances, those who give the preference to the smaller and older sheep, have been deceived at the table of their friend: but during the time I was in Derbyshire (though no epicure) I found no difficulty in distinguishing the flavour, and giving the preference to the aged small mutton; and therefore in this respect I am free to own, that the new breed of Leicestershire beef has an advantage over the new breed of Leicestershire mutton.

Taking a general view of the sheep in Derbyshire, from the most pure Leicestershire new breed, they gradually lessen in size and value down to the small, coarse, hairy-polled sheep; and in the mountainous part of the county, we find the size of the sheep proportioned to the quality of the land, and nature of the pasturage: on the commons, many of all sorts of breed, which I shall call foreigners, from their being sent to joist from different places; but in general, in the High Peak, they choose the close woolled hardy sheep, observing the closeness of the wool as a certain proof of their being more likely to stand the rainy seasons of this district; and indeed I am of opinion that they must improve their land before they can much improve their sheep. In a large district, near the source of the Derwent, I found considerable sheep farms in what is called the Woodlands (a term I think ill-applied, for I saw very little there); the breed seems calculated for the pasture; and in this instance I must beg the Leicestershire breeder will excuse me in differing from him in opinion, when he asserts that their sheep *are to be preferred, in all pastures, and all soils and situations whatever,* to any other that can be put into the same pasture with them—I think the size of the sheep, the quantity of its wool, the close texture of its fleece, and the

shape of the animal being calculated to undergo the fatigue of searching for its food (which in some situations is absolutely necessary), are requisites which the new Leicestershire breed do not possess. I can assure him, that in travelling from Glossop to Derwent, I was overtaken by a sheep pursued by a dog; the sheep I suppose had strayed in quest of food (and where scarcity is, surely the sheep calculated to *search*, is preferable to that which is loaded and incapable of travelling): this animal I observed every now and then stopped to graze; the dog seemed not to understand perfectly his master's signals, who had placed himself on an eminence, as if to direct the chase; and for the space of half an hour this sheep was in my view, and certainly led the dog a dance of two miles. I do not say that this racing was necessary, but I will maintain that searching for food was next to self-preservation; and that perhaps this quick motion through the air might shake off the wet, and cause the fleece to dry sooner than it would have done if confined to one spot. And I would ask any Leicestershire breeder, how his sheep would have *shifted* in such a situation?

Horses.——The cattle used for the plough in the fertile part of Derbyshire, are chiefly brood mares, of the strong cart kind; and in general are excellent stock for breeding waggon and dray horses, which are in such request in every part of the kingdom. The opportunity a dairy farmer has of laying brood mares in pastures, and keeping a sufficient number to do the work, and occasionally rest, seems to me an advantage, by which he may avoid the exorbitant expence of horses in the stable feeding on hay and corn to go to plough.

The introduction of brood mares to do the work, seems to me one cause why we find no oxen employed in tilling the soil; and in brood mares, great improvements have certainly been made, and I trust will continue to go on, from the conveniency of the pastures, and the fair field they open for extending and improving the breed of draught horses. Mr. Bakewell's stallions are heard of, but not half so much as the show of Leicestershire rams and bulls. In the mountainous part of the county, we find a nimble, lighter animal, which has always been habituated to travel

over rocks and precipices, and draw in a little cart, or carry a kind of pannier on its back; and what I said of the Peak sheep, I am ready to say of the Peak draught horse—improve the soil, and then you may improve this species of animals; for I am of opinion, that larger and better horses would require better keep, and better roads to travel upon, than what the Peak in its present state affords.

Hogs.——As a dairy country, it may be supposed to abound with hogs—In every dairy farm we find a very good stock of hogs, and of a very good sort; such as in the southern part of the kingdom are known by the appellation of the Berkshire breed. The management of the dairy being well understood by the mistress of a Derbyshire farmer's family, she does not neglect her hogs; and we find that from the breeding and improving of hogs, a profit of from twenty to five-and-twenty shillings is made from each cow, by the maintenance of hogs from the offal of the dairy.

IRRIGATION.

The situation of this county, consisting of hill and vale, may naturally be supposed to present us with great improvements by flooding the land—That it has been practised long ago, and that less is done now than formerly, is observable in many parts of this district. Taking the general sense of the occupiers of land, they are not very fond of it. The still brooks that empty themselves into the Dove, have been converted to this purpose in several places. But the Answers to Queries dispersed in this neighbourhood are not in its favour; the bad effect being by some (very properly) attributed to letting the water remain too long upon the land: from others I received the following answer to that query: "What little has been tried, no advantage has been received." The coal and minerals of Derbyshire, are certainly strong reasons for the water not fertilizing the land;—that irrigation increases the verdant appearance of the mead, and the bulk of its crop, is an uncontroverted fact, but in many places, as well as in Derbyshire, its effects as an improver of the soil become extremely problematic.

My own opinion has always been, that in flat meadow grounds, where a running stream is applied, in process of time it changes the nature of the grasses, substituting the coarser sorts. The situation where the most benefit may be expected, is the declivity of a hill, where a small quantity of water may be diverted over a great surface, and readily taken off; more especially where the water is impregnated with the drainings of a town, village, or even farm-yard. Rapid washings with clear water, will certainly fill the pores of the earth with moisture; but I find some difficulty in believing that the surface of the meadow scoured with a clear rapid stream, can add to the staple, or improve the soil as a manure—A deposite seems the more likely method to improve; and I am sure that wherever the small deposite of a clear river is of a chalybeate nature, the growth of the plants gains nothing by the bargain. Perhaps it is owing to this that the finer grasses, whose roots spread nearer the surface, are obliged to give way to the coarser sorts, whose roots running deeper in the earth, escape the poison, and gain an ascendancy over those that are more immediately exposed to its influence.

That a considerable part of Derbyshire may be watered, is true, but I should strongly recommend the examination of the nature of the water, before it be attempted on a large scale.

THE GRAINS PRINCIPALLY CULTIVATED.

By reference to the rotation of crops, mentioned under the head,—*How the Land is employed*, it will appear, that in the district denominated Fertile, wheat, barley, oats, and beans, are the sorts of grain principally cultivated—In the Low Peak, barley, pease, oats—And in the High Peak, chiefly oats. In all of these, however, mixtures of others are also tried. We discover vetches, lentils, potatoes, and cabbages. At Bretby, the gardens which formerly poured on the tables of their illustrious possessors all the

profusion which the soil and climate were capable of producing, are now employed in raising the seed of cabbages; a sort (of the York species) that has been cultivated there with great success for many years, and is remarkable for its size and durability in the winter.

Potatoes being more eminently a Lancashire produce, it might be deemed tautology to say any thing here of their cultivation: I shall only mention them, in order to give room for marginal observations, if any improvements have occurred to any of my readers in the county of Derby. But finding in Chesterfield, and some of the adjoining parishes, particularly in that of North Wingfield, in that district which I denominate the Low Peak, many acres planted with

Chamomile,——and conceiving it not usually cultivated as a field crop, I shall begin with observing, that a loamy soil is chosen for this purpose; that after the ground is well prepared by thorough cleanings (which however is not always practised), about the end of March, the roots of an old plantation are taken up, and divided into small slips, which are planted in rows about eighteen inches asunder, and about the same distance in the rows. The plants are kept clean by frequent hoeing and weeding with the hand. In September, the flowers are fit to gather; their perfection depends upon their being fully blown, without having stood so long as to lose their whiteness; the flowering continues till stopped by the frosts. The gatherings are repeated as often as a succession of flowers appears; this depends very much upon the season, dry years furnishing more, and wet or dull weather fewer successions of flowers. When gathered, they are carefully dried, either in kilns very moderately heated, or on the floors of boarded rooms, heated by slow fires; the object is to keep the flowers white and whole; and this is done only by drying them as slowly as possible. The produce varies from two hundred weight, or even less, to four, five, and in some (though as I have learned but in few instances) to six hundred weight per acre: the price has also varied from 40s. to £7 per cwt. From the best accounts I have been able to obtain, four cwt. at £4 per cwt. may be con-

sidered as the average produce and price. The plants usually stand three years, of which the first affords the smallest, and the second the best and greatest produce. Sometimes the same plants are continued beyond three years, but the ground gets foul, and the flowers are weak and bad. The flowers when dried are packed in bags, and bought up by persons in the neighbourhood; by whom they are sold principally to the druggists in London. Some persons have used them in brewing, as a succedaneum for hops; and others contrive to mix them with hops. I am informed they will not answer the end, and that few people approve the taste, even when mixed. From the information given me, I apprehend that about two hundred acres of land here are employed in the cultivation of this plant.

Fallowing.——From what has been said, the Board will perceive that fallowing is practised in Derbyshire, and I am proud to add, by the very best practical farmers. Green crops, such as vetches, clover, cabbages, coleseed, and turnips are, no doubt, substituted, with additional ploughings, in lieu of fallows in many parts of the kingdom, particularly in the neighbourhood of great towns, post roads, or wherever what I call foreign manures (such as are brought into a farm over and above that which annually renews from the produce) are procured; yet even in this situation land may be over cropped and rendered unfruitful, for want of clean fallowing and rest. Although this may not appear at first sight, yet so far as my experience goes, sooner or later the land will be reduced to that state of weakness and imbecility, in which no manure, no hasty stimulus, or drunken dressing, nor green crop, will enable it to sustain and perfect a beneficial crop of grain. Manure and green crops, it is true, will produce a crop of straw, but for want of that vegetable aliment, which can only be restored by fallowing and rest, the crop of grain will ever fall short of that farina, which is the life and soul of all white crops. I am aware that the advocates for exploding fallows will say, why do you dress your land so much; you must crop it oftener, for the land is too rank. Follow their notion, and you will find your system of husbandry reduced to such a narrow basis, between weeds and

straw, that fifty to one the crop will fall a sacrifice to the one or the other; if it has the good fortune to escape the calamity of being laid, from the happy circumstance of a dry season, it then has to struggle with the chance of being over-run with such weeds as are not checked by drought, and frequently, instead of a crop of wheat, you reap wild oats. I know some land whose management is within my own observation, and that for the last 20 years has not been rested more than one year at a time, under clover, and never experienced a clean summer fallow; the land in my eye was last year sown with wheat, after a very abundant crop of vetches mown green for horses. The crop at this time is in swarths for hay, for instead of a crop of wheat, there is four to one wild oats; and yet together the wheat and wild oats are sufficiently prolific to yield after the rate of two truss bound load of hay to an acre. So rooted, however, is the occupier of this land (who by the by is also the owner) in his aversion to clean fallows and rest, that he is not to be persuaded from immediately sowing it with turnips, and next spring, if the turnips are good and eat off in time, in all probability will again sow it with wheat, confident that it is so full of dressing, it wants nothing but cropping.

In the poorer soils, it is extremely difficult (and consequently very rare) to bring them into this state of imbecility; but in lands by nature prolific I am persuaded it will happen. And turning our eye to the most prolific soils of eastern countries, even the land of Judea, when its cultivation was in the greatest perfection, the legislator commanded the husbandman to cause the land to enjoy its sabbaths.

IMPLEMENTS IN HUSBANDRY.

Ploughs.——Of this instrument in Derbyshire they use several sorts; the double plough, mounted on wheels, performing two furrows at once, drawn by three, four, and sometimes five or six

horses at length in the furrow.—This instrument, when well made, performs very well, but wherever it requires four or more horses, and a driver, the only advantage I discovered was to the ploughman, for in ploughing two acres, he walks only that length of ground which the ploughman, with the single plough, does in ploughing one acre. When I saw its performance with four horses and two men, and viewed the nature of the soil, I was struck with the idea, that two of the Norfolk wheel-ploughs, two horses, and without a driver, would perform more work with the same powers, and more ease to the horses; and I believe most of the farmers that use this plough will admit, that two ploughs, with two horses in a plough, will perform more labour, and with more ease to the horses, than four horses in one of these ploughs. But they say, that for two ploughs, two drivers are requisite, and here they do with one; the advantage is gained, and the disadvantage vanishes whenever they may adopt the Norfolk plough, and manner of ploughing.—The single plough, with two wheels, is used here; is well made, and performs the operation well: they make them still lighter, with only one wheel:—but the plough most commonly in use, is that of which I am favoured with the drawing (Fig. I.), sent to me by the liberality of Mr. Roe, the drawing-master of the public school at Repton, being the performance of one of his pupils in that famous seminary of learning. —This simple instrument is easily procured, and in most cases performs very well. But I cannot help suggesting, that wherever this instrument will perform with two horses and a driver, I think the Norfolk plough would perform equally well, and save the expence of a boy.

Harrows.——They have the common light harrows, made lighter or heavier according to the nature of the soil, and generally coupled together, each horse drawing his own harrow in the usual way; but in the Peak I saw a practice of drawing two harrows with two horses at length, and the man leading the foremost—the awkwardness and absurdity of this practice, even the man himself readily owned; but added,—"it is what we are use to."

Carts and Waggons,——on the common construction, are in use all over the county—In the mountainous part, they have a light little cart, drawn by one horse; and here we plainly discover the advantage of small carts, where one man going to the coal-pits with four, five, and perhaps seven or eight of these little carts, and one horse to each, will certainly bring away more weight, with less friction, and more facility, than the same number of horses could draw in one waggon. During my Tour, I did not discover any instrument that is not common—the cradle scythe used in Hertfordshire, of which I have given drawings (Fig. II.), I think would be an acquisition to many farmers in Derbyshire. The cradle costs two shillings, and may be mounted on the grass scythe which is in common use in the county of Derby.

OF HORSES AND OXEN.

The dairy farmers seldom plough much, and consequently have less to do with either horses or oxen; but even the dairy farmer, that is alternately breaking up and laying down his artificial pastures, and improving his farm, finds considerable employment for draught cattle. This in Derbyshire, as I have already observed, is performed, I believe, entirely with horses; for I do not recollect to have seen or heard of any teams of oxen used by farmers—Their brood mares, of the draught kind, form their teams; and in a dairy country, I am persuaded, are well calculated to breed the strong draught gelding, so much wanted in every part of the kingdom. Suppose the work of a farm sufficient to employ four horses; instead of four, the dairy farmer keeps eight, and works them alternately: his eight mares, lodged continually in his pastures and yards, with very little corn, will do the work of four horses, or of six bullocks, and rear him five or six colts; —these colts, at 12 months old, are sold from 12 to 18 pounds each; if so, this nearly repays the expence of keeping the beasts

of draught necessary for the farm, and gives the farmer the advantage of occasionally working an extra team; which in critical times, on sowing turnips, and in harvest, I consider essential. To have it in his power to sow all his turnips while the land is in a proper state of moisture;—to carry all his hay while the sun shines;—to cart all his corn during the fine weather; and at all times, as it were, to be master of his work, gives such a decided advantage to the farmer, as in my opinion sufficiently counterbalances any extra expence that may be incurred by keeping one or two additional brood mares in his pastures; and this advantage I think easier obtained by keeping brood mares of the cart kind, and at less expence than by keeping oxen, or any other species of animals for draught.

SEED TIME AND HARVEST.

The best farmers usually sow beans and oats in February; barley in March; and wheat in the beginning of October; if the season permits them so to do, their crops will be ready to cut in August and beginning of September, in the ordinary course of seasons; but this varies with the variety of seasons. The more northern and mountainous part of the county, is considerably later than the Fertile Soil in the southern district—I saw in the High Peak the farmers sowing both oats and barley in the second week in May; although on entering the county near Ashby, on the 22d of April, I found all those farmers who were masters of their work had then finished sowing.

INCLOSURES AND COMMONS.

Within the last 15 years, I believe that above one-fourth part of the whole county of Derby has been inclosed—the two districts which I have denominated Fertile and Low Peak, are almost entirely inclosed. The High Peak remains a field, in many places, for

that improvement. The advantages arising from inclosing are very great, both to the owner and the community; the advantage to the owner being in some measure governed by the nature of the soil, the quantity of waste, and expence that attends the inclosure and making the roads. Some inclosures within the last 15 years, I have been told, have nearly doubled the rental. Immediately on being inclosed, the rents advance between a third and a fifth. The increase of the corn does not seem to be in this proportion, for usually on being inclosed much of the land is laid down under artificial grasses, less ploughed, fewer fallows are made, and more of green crops are introduced into the system of husbandry. The quantity of the general produce, however, certainly increases in a greater proportion than the rent; for by inclosing, the capital employed by the farmer is considerably increased, and I think it demonstrable, that the more capital a farmer employs in the management of his farm, the greater quantity of produce he carries to market for the use of the community. The stock on an inclosed farm undoubtedly improves; for no longer subject to the customs of the place, every farmer is at liberty to consult his own judgment in the improvement of his cattle; and experience shews, that the stock in the inclosures is generally better than that in the common fields. The nature and size of the inclosures seem to be well understood by the men who have been employed; in general, they have very judiciously adapted the size of the field to the size of the farm; and if I might be allowed to offer a hint for future inclosures, it would be, to consult as much as possible the nature of the soil, and to place the fences as near as may be on the spot where the nature of the soil changes.—I know it cannot always be done; but I certainly should recommend the sacrificing of a straight hedge, to attain the acquisition of having the soil in each field of one nature, or as nearly so as it is possible to attain that point: many farms labour under inconveniences in this respect; for where a field of twenty acres consists of soil fit to graze, and soil only capable of rearing young stock, the disadvantage must be apparent to every one; and in arable fields the disadvantage is

still greater, for the culture and cropping that succeeds best on clay, is not by any means the best that can be adopted on a gravel.

POPULATION.

Those who have urged the impolicy of inclosures, from the idea that they depopulate, must have taken up the matter on very superficial grounds——Ask any man if the planting, preserving, and rearing of hedges, is not attended with much expence; and if, even after they are reared, whether the cutting, scouring, and keeping them up, does not require much attention and increase of labour? The dressing and keeping an inclosed field in a proper state of cultivation and improvement, is certainly equal to what is done in the common fields. In a word, I think no man will contend for a moment, that to cultivate and improve land after it is inclosed, requires less labour than it did in the common field state; nor that men will do more labour in a day than what was formerly done. If my position be right, it will follow, that the number of hands employed cannot be diminished. I know there are places where common arable fields have been inclosed, laid down in pasture, and neglected; less ploughing done, and perhaps fewer labourers employed, after the inclosure; but this very rarely happens, for wherever inclosures are turned to the most advantage, I will contend they require an increase of capital, attention, and labour; and consequently that the number of labouring hands are not diminished. So far as my experience goes, inclosing in the first instance requires an increase of capital to be employed in agriculture; this capital renders the product of the land more abundant, and this abundance requires more hands to be employed. By the facility with which abundant produce is managed on inclosed lands, the additional capital employed makes its returns, so that there are more hands required, and more produce carried to market.

In regard to the population of Derbyshire, I believe it is very

much increased; but this can only be ascertained by more local knowledge than what my time on this occasion could possibly furnish. As this, however, is so important a subject of inquiry, I thought the Board would wish to have some idea respecting it: in the Appendix, therefore, I have given the information which Mr. Pilkington of Derby had collected in 1788, extracted from his History of Derbyshire, published in 1789. By that Abstract it appears, that the number of houses then amounted to 25,642 (by some mistake stated in Vol. II. p. 49, at 25,206, perhaps owing to some confusion between houses and families). He counted the number of houses in every parish; and in about 30 parishes he ascertained the number of inhabitants. By the proportion between the houses and the inhabitants, in the parishes where he counted both, the inhabitants amounted to 49,379, or nearly 5 to a house. He states that in 1788, the total number of inhabitants in the county was 124,465. In his account, Mr. Pilkington reckons the number of houses in the parish of South Wingfield to be 127; and by his mode of reasoning, the number of inhabitants will be about 630.—I believe population to be increasing very fast in Derbyshire, from the number of inclosures, and extent of trade and manufactures; and think this parish of South Wingfield to be a medium for the county, especially as it was inclosed in 1786. I find an exact account taken by Mr. Blore (who seems well qualified to give a most excellent and valuable History of Derbyshire, in which at this time he is laudably engaged): in 1792, he makes the number of houses in South Wingfield to be 165, and of inhabitants 769.

Having every reason to be satisfied that both these accounts are correct, and following the three grand divisions of the soil, I find that what I have called the Fertile part of the county, contains about - - - Acres 213,120

What I call the Low Peak land, contains about - 231,680

And what I call the High Peak land, contains about - - - - - 275,840

Making the whole county about - - 720,640

The general State of Population, collected from these materials, will therefore stand

District.	Statute acres.	Population from Pilkington, in 1788.		Population from Blore, in 1792.		Population and average acres to each house, and to each individual, supposing the increase that happened in 4 years, in the parish of South Wingfield, to hold good in every part of the county.				Increase from 1788 to 1794.	
		Houses.	Inhabitants.	Houses.	Inhabitants.	Houses.	Inhabitants.	Acres to each house.	Acres to each person.	Houses.	Inhabitants.
								A. R. P.	A. R. P.		
Fertile Soil -	213,120	7,125	35,182	9,256	43,138	10,321	47,116	21 0 0	4 2 3	3,196	11,934
Low Peak Soil	231,680	9,734	48,065	12,646	58,938	14,102	64,374	16 1 28	3 2 15	4,368	16,309
High Peak Soil	275,840	8,783	43,369	11,411	53,182	12,725	58,088	21 2 28	4 2 1	3,942	14,719
Total - -	720,640	25,642	126,616	33,313	155,258	37,148	169,578			11,506	42,962

If we deduct one-eighth part for roads, rivers, wastes, woods, and hedges, in the Fertile and Low Peak districts, and two-third parts of the High Peak, for wastes and unprofitable lands, which it is believed is about the fair proportion, it makes the heaths, wastes, moors, woods, roads, rivers, and lands, not employed in husbandry, to consist of about 239,492 acres (nearly one-third of the whole), leaving 481,148 acres for arable and pasture; of which not more than one-fifth part is annually cropped with corn, the four-fifths being either old sward, or artificial grasses; hence the convertible land is reduced to something less than three acres for the support of each inhabitant; and as they are so rapidly on the increase, it leaves but little room to suppose the price of provision will fall; on the contrary, when we consider the number of animals of burden, and those kept for pleasure, I think we may fairly conclude, that the price of provision is likely to rise: for by this state of population, and the extensive wastes in the High Peak, this county does not appear to be in a sufficient state of cultivation to support its inhabitants, and much less to carry any corn to a foreign market; indeed, cheese, and a few colts, seem to be the only commodities which the farmers send out of their county.

From what has been said on inclosures and population, it is evident that many advantages arise from this practice; and consequently where there are open fields and waste grounds, propositions for inclosing have in most places been made, and in some places are at this time carrying into effect; and that where inclosures have not been made, it only waits the concurrence of the individual owners, which time may reasonably be expected to produce.

WAGES,—PRICE OF LABOUR,—AND HOURS OF WORKING.

Derbyshire abounding with mines and manufactures, the labouring hands find other employment beside agriculture; conse-

quently the price of labour to the farmer fluctuates according to the briskness or stagnation of trade, and the different demands for the produce of the mines.—The most general prices seem,

Labourers from Candlemas to Martinmas—1*s.* 4*d.* to 1*s.* 6*d.* per day: hours of work from six to six. From Martinmas to Candlemas, 1*s.* 2*d.* per day, working from daylight till dark.

Near market-towns the wages are from 1*s.* 6*d.* to 2*s.* per day; between Derby and Ashborn, from Lady-day to Midsummer, the wages are from 1*s.* 6*d.* to 2*s.* per day; from Midsummer to Michaelmas, from 2*s.* to 2*s.* 6*d.* per day; and from Michaelmas to Lady-day, 1*s.* 4*d.* to 1*s.* 8*d.* In the harvest month, beer is always added to the above wages; and the hours of working, early and late, as the dews will admit. Reaping wheat, 8*s.* per acre; oats, 5*s.* per acre; mowing barley, 2*s.*; grass, 2*s.* 6*d.*; threshing wheat, 2*s.* 8*d.* per quarter; barley, 1*s.* 8*d.*; oats, 1*s.*

It is not unusual for a farmer to find the labourer his board; where this is done the hours of working are the same as above stated; and the price of labour is,

From Lady-day to Midsummer, 5*s.* per week; from Midsummer to Michaelmas, 8*s.* (always 9*s.* in harvest); from Michaelmas to Lady-day, 4*s.*

Hired Servants.——The best man-servant from ten to twelve guineas a year; a woman from four to five guineas.

Throughout the county, among the lower class of farmers, much praise is due to the master for his affability and attention to the labourers he employs: nothing is more common than to see them rising from the same frugal board, and saying to each other, come, let *us* go to such a job. Nor is this meant to the disadvantage of the more opulent occupier of lands.—In all well managed farms, the intelligent and humane master provides with equal assiduity for the comfort and support of his faithful and industrious labourer; so that throughout the county, if there is want of either labour or comfort in the cottage, it generally arises from want of industry or good morals in the cottager. Discontent seemed to me to be most prevalent among the manufacturers, who have the highest wages, a large proportion of which is laid out for beer, or

more pernicious liquors; and I believe it is usually found that the seeds of discontent meet with the richest soil in the increased population consequent on manufactures. The demagogues of the day find this the scene for action, and are extremely active; they often fix upon the most ingenious artificers as tools to disseminate their pernicious principles—hence it becomes the indispensable duty of the master of such men, to endeavour to influence their morals by public as well as private example——Woe must await that nation where both masters and servants become immoral and dissatisfied. And any pretext for licentious conduct is eagerly urged by those, who vainly flatter themselves that general confusion is the road which will lead them to power; and is as readily adopted by the profligate, who supposes he may seize in a scramble that which he has not virtue or patience to acquire by industry.

DRAINS AND DRAINAGE.

This district, consisting of mineral stratas, immense mountains and deep vallies, may well be supposed to consist of innumerable springs, which, in good husbandry, require the application of drains; and this the natives call *soughing*. Much attention is paid to this improvement by every intelligent farmer; and the drain adopted is according to the nature of the soil, and material fittest and readiest for the purpose—Stone being superabundant in almost every part of this county, and well calculated for drains they are generally made of that material, and in their construction the most rational method attempted for duration and service this, however, varies according to the nature of the soil, and the hardness of the stone; but every other method seems to bend to that practised by Mr. Elkington, whose practice is becoming every day more extensive, and seems to me the most effectual of all others for carrying off subterraneous waters.—He lays a stone drain, from three to six feet below the surface, in such a direction as to cut the source of the spring, and with such a declivity as

scour itself; wherever he finds the source of the spring below the level of his drain, he bores, and with such judgment, that to a stranger his auger seems possessed of the virtue of that rod with which Moses struck the rock, for the water immediately gushes out, and perhaps lays land, that before was too wet to carry a sheep, sufficiently dry to carry the heaviest ox. This method certainly is effectual against springs; but a single drain, and that perhaps at a considerable distance from the land in want of drainage, cannot be supposed to carry off the surface wet occasioned by rains, which sometimes remains till it filters through the soil down to the spring where Mr. Elkington bored—this in some instances produces stagnant water on the surface; and, in my opinion, if the Northamptonshire draining-plough (of which I have given a drawing, Fig. III. and which the practical farmer will easily be able to adopt, by only adding an upright fin to the share of his own plough) were applied to the surface of such land in the winter, the furrow turned in on the approach of spring, or burnt or rotted for a manure, as the nature of the soil may point out, it would be found of service in many situations.

PARING AND BURNING

Has been adopted in many parts of this county, and is now practised with various success, but in general is rather wearing into disrepute. Meaning hereafter (conformable to the instructions of the Board) to take the liberty of giving a few thoughts on the Means of Improvement, I shall reserve my observations on this system for that opportunity.

TIMBER, WOODS AND PLANTATIONS.

A great part of those districts which I have denominated Fertile and Low Peak, are wooded, and well calculated for the pro-

duction of timber.—Kedleston park stands unrivalled in the county for timber and plantations; and is a striking instance that even the best pasture land may be planted without diminution of the rental of a family estate. In general through the county, timber though small, is valuable; but from the plenty of coal and wood for fuel, will not answer for cultivation. However, the ingenuity of the natives renders the stub of the ash, the hazle, the sallow, and other shrubs, of more value here than in the southern counties where they are cultivated for fuel; and many parts of this county send tools made from these shrubs into counties where they are more plentiful.—The mines render every piece of timber, though ever so insignificant in itself, truly valuable; and those who do not sacrifice every thing to immediate convenience, very laudably attend the increase and improvement of their woods, by regular falls, and keeping up a succession.—But generally speaking, the quantity of timber and woods are upon the decrease: land becoming more valuable than formerly for corn or pasture, every one is engaged in rooting up all those brambles, thorns, and bushes, which are the natural guardians of the oak, the ash, and the elm in their infant state; and too little attention (as I shall hereafter shew) is paid to the propagation of timber, on land which by nature is incapable of any other improvement.

PRICE OF PROVISIONS.

From the number of inhabitants, the quantity of unprofitable soil, and the numerous manufactures carried on in this midland part of the kingdom, provision in general is full as dear, and in the article of corn, dearer than in the metropolis:—without some means be discovered to keep up the increase of food with the increase of its consumption, in consequence of additional population, I think we may reasonably expect that the price of provision is more likely to rise than to fall. The new breed of cattle, which certainly requires less time, and consequently less food to fat

them, is no doubt the only rational mode by which we are enabled to account for butchers' meat not being, with regard to price, in the same predicament with corn—To enumerate the prices would be to give a return of the different markets in the year, and which will, in all probability, vary every succeeding market.

STATE OF THE ROADS.

In the lime-stone districts of this county, the materials are of that durable nature, that in general both the public and parochial roads are good, except on those steep ascents where access is made difficult. The manufacturers having found good roads essentially necessary, we find great attention has of late years been paid to their improvement; but in many of the parochial and bye-roads, a traveller is easily convinced that all the statute duty enjoined by the existing laws is not punctually performed—A due attention to this, when we consider the plenty of materials, would certainly render them in a better state than the present. Perhaps the small quantity of corn the farmer has to draw to market, renders it of less consequence to the natives—a bullock, a sheep, or a horse, will travel where it would be difficult for a cart or a waggon.

STATE OF THE BUILDINGS AND FARM OFFICES.

In the new inclosed and fertile parts of the county, where improvements have been properly carried on, we find some very convenient and well adapted buildings; in others, where the old buildings are made shift with, they are mean and inconvenient. Materials for building in this county, especially the lime and stone, are no where to be excelled; and when I inform the Board of Agriculture that every necessary building for a farm of £200 a year may be erected new from the ground for about £500; and

that those buildings properly executed, from the goodness of the materials, are a trifling expence when compared with the cost of repairs on estates in general; I think that to be deficient in those conveniences which are essential to the best management of a farm in Derbyshire, is a wilful neglect, which a stranger does not easily find an excuse for in a Derbyshire gentleman. That these conveniences are wanting in some places, must however be acknowledged. During my Tour, I met with a farm-house and offices entirely new; and finding it to correspond with my ideas of a compact, well contrived, convenient plan, substantial, and not superfluously expensive, I made a sketch (Fig. IV.) of the various buildings, and the manner in which they are arranged.

Of the house.—1. The bakehouse, brewhouse, and washhouse, in which are coppers fixed, cheese-press, and necessary utensils for the work of the dairy.

2. The kitchen or dwelling-room.

3. The stair-case, in which there is a door under the landing that leads to the cellar under the parlour, which is a boarded floor.

4. The parlour.

5. The pantry, to which you descend by three steps.

6. The dairy, shaded by shrubs in the garden, to which there is likewise a descent of three steps.

Over the kitchen is the family sleeping-room; over the parlour a spare room; over the dairy (which has a lean-to roof) is the maid-servants' room; over the bakehouse, the farmer's daughters; and beyond their room, near to the stables, the farmer's sons; beyond which, over the stables, the farmer's men, whose room communicates with the stables by a ladder, and with the farmer's sons' room door, which allows the son to examine the stables, and is found very convenient where there are brood mares; and beyond the men's room, over the stables, the cheese-chamber. The staircase communicates with a passage to the daughters' room, the maids' room, and the sons' room.

Of the stables.—It is divided into stalls and conveniences for the brood mares, with hay-binns, &c.

Of the cowhouse.—1. The stalls for 16 cows.

2. Passages for feeding them over a four-foot wall.

3. Cribs of plaster for feeding the cows.

4. House for weaning calves.

Of the hogsties.—1. Cotes; over which are the hen-roosts.

2. Feeding yards, furnished with hoppers in the fence for the wash and food.

Of the barns and sheds.—The barn is a plaster floor; the walls and roof are furnished with air-holes, and loop-hole doors, to receive the corn.

The whole is finished with substantial brick-walls and tiled roofs; and in point of execution, bids fair not to cost £5 in repairing, if no accident happens, for 20 years to come.

LEASES.

The largest estates in this county are without leases; and in general leases are wearing out of use. On some estates of considerable extent in the High Peak, I found a printed lease, where nothing remains but for the steward to fill up quantities and names.—By these leases, the tenant enters upon all the arable and meadow grounds from the 13th of February, and upon all the pastures from the 5th of April, except a specified close, which the way-going tenant has for foddering his cattle in, under the name of a boosey pasture; and this boosey pasture, with the house, buildings, yards, orchards, and every other part of the premises, the way-going tenant surrenders to his successor on the 12th of May. The term is generally for 21 years; and the rent made payable in half-yearly payments, at Lady-day and Michaelmas—The usual custom is, that at Michaelmas they pay to Lady-day, and at Lady-day to the preceding Michaelmas. The tenant covenants to do suit and service at the lord's court, mulcture at his mill; to pay all tithes and taxes, except land-tax, to do all repairs, having stone provided in the quarry, and tinsel crop for

fencing, to plant upon every acre in length (by which is understood the side of a square acre) three oaks or trees, the landlord finding the plant;—to manure the premises with the produce; he is not allowed to plough more than one-third of the arable land, having the other two-thirds under artificial grasses; not to plough any of the old meadows under the advanced rent of £5 an acre; not to take more than two crops of the same grain in succession; that for every acre he may break up of the artificial pastures, he shall lay down any equal quantity of the land under tillage, with six pounds of clover, and twenty-four bushels of hay-seeds; not to lop or destroy any timber; not to underlet; to preserve game; to serve offices incident to the farm; to keep a dog for the landlord; to give notice of poachers, and to bring actions against them, on being indemnified by the landlord. The landlord enters into the usual covenant to defend the tenant in quiet possession; and usually reserves a power to enter upon any quantity under one acre, on any part of the farm, on abating sixpence for every 64 square yards; and this with a view to build upon, or to accommodate manufacturers with the natural advantages this country every where holds out, of searching for mines, or erecting mills.

As I am of opinion that leases and the nature of their covenants are essential to improvement, on which I shall hereafter have occasion to speak, till then I beg leave to dismiss this subject.

COMMERCE AND MANUFACTURES.

In the course of my investigation of the present State of Agriculture in this county, I have frequently had occasion to mention that commerce and manufactures are carried to a considerable extent; of their influence on agriculture, I have had occasion to hint that, where the occupation of the soil falls into men's hands engaged in other pursuits, we see the land neglected, and a want of that scientific knowledge in husbandry, which they

have attained in manufactures.—But when agriculture and manufactures are considered as separate and distinct sciences, and carried on as such, they assume their true characters of sister-twins, and are fostered by and fostering to each other;—the manufacturer buys from and pays the farmer for his food; and the farmer buys from and pays the manufacturer for his goods, and enables him to export his manufacture; the abundance of the farmer's crop finds a ready market in the manufacturing town; and the manufacturing town finds itself well supplied, and enabled to rival foreign markets, by the abundance of the farmer's crop.—Such must ever be the case where wise regulations between agriculture and manufacture prevail; —if wild schemes are pursued that ruin either, they generally ruin both. But to discuss the question, whether the poors rates and taxes which the land has to pay for the support and protection of trade,—whether our wars are provoked by our ambition to extend commerce, our impatience of controll and irritability at any thing like to competition,—or whether they are only entered into for the protection of the land; are disquisitions to which I confess myself unequal; one circumstance, however, struck me in this Tour, that the greater the extent of trade and commerce was at any place, the more valuable the land, the higher the price of provision, and, as it were, the more all matters depended upon the extent and stability of that trade (a thing extremely problematical, where it consists in the manufacture of raw materials which we import, and have to search for foreign markets for its sale when manufactured); consequently every thing, which even trade herself, with all her inviting accomplishments, could render desirable, became more and more doubtful in proportion to the extent of, and dependance upon the trade; and in some places so much so, as to render even the peaceable existence of the natives uncertain. From hence it may be inferred, how much depends upon our trade and commerce, and how tenacious we ought to be in the mutual support between agriculture and manufacture. Having, as I humbly conceive, thus far impartially stated to the Board of Agriculture

what may be considered a Syllabus of the present State of Agriculture in Derbyshire, with the occasional Remarks that occurred, I shall now proceed to my second head proposed, under which I shall give

MISCELLANEOUS REMARKS.

I found no agricultural society established in this district, except I may be allowed to apply that appellation to a laudable meeting, occasionally held among a few gentlemen in the neighbourhood of Derby, at seasons when they wish to examine the excellence of their live stock, to associate, inform, and vie with each other in the management of their domains; but even this institution I could not learn had ever exceeded a family visit. Reasoning upon the exports and imports of the county, and the superabundance of produce, the little time I was in the county, I could only learn that cheese was the chief, if not the only article of provision which the natives can spare out of their own county; and thinking the Derbyshire cheese very good, I have collected the manner of making it in three different dairies.—

In the first dairy, the mistress says, the colder the milk is when put together for making cheese, the better; that when she finds it sufficiently cold, she puts a sufficient quantity of rennet to make it "come" in an hour; it is then stirred or broke down with the hand very small, and left to settle about half an hour; then the whey is got from the curd as much as possible, and gathered into a firm state in the cheese-pan; then a vat is placed over the pan, and the curd broke *slightly* into it; it is then pressed by the hand in the vat over the pan, whilst any crushings will run from it (the more it is crushed the better); a small quantity of the curd is then cut off round the edge of the vat, and broke small in the middle of the cheese; and after a little more pressing it is turned in the vat, and the same method of cutting the edge off is again observed; afterwards a clean dry cloth is put under and over the cheese in the vat, and it is put in press for one hour;

then it is again turned in the vat, and pressed ten hours, when it is taken out, and salted on both sides (a cheese of twelve pounds will require a large handful of salt on each side); it is then put in the vat, wrapped in another clean dry cloth, returned to the press, and kept there two or three days, turning it every ten or twelve hours; the last time it is turned, it is put into a dry vat without a cloth, to take away any impressions.

This dairy woman's cheese never heaves, but is in general dry, sound cheese, and is in perfection at a year and a half or two years old.

The second dairy woman pursues the same mode as the first, till the breaking the curd in the vat, which the first does *slightly*, but she breaks it very much (otherwise she says the cheese is subject to be unsound); in crushing it over the pan, they make use of a thick board of a half circular form, which covers half the vat; they kneel upon the board and press the other side by hand, frequently changing the board from one side to the other; she presses it in this manner very much, but does not cut the edges off round the vat; she has a cloth under it in the vat from the beginning, and turns it once in making. After being in press about an hour, she puts it into clean water, rather warmer than new milk, wrapped up in the cloth it was made in; it remains in the water about three hours (she thinks water is better than whey for scalding, it making the cheese milder); it is then put in press again for an hour, and a dry clean cloth is then put to it, and it is pressed for another hour; then salted and put in press again; she always presses them two days, and turns them every twelve hours; the last twelve hours they are pressed in a vat without a cloth, to take away any impressions; she always uses a tin girth, which she puts round the inside of the vat, to prevent the cheese from being pressed over the edge of the vat; when the cheese is in the chamber, it is turned every day for a fortnight or three weeks; after that time, once in two days; it is rubbed, whilst soft, twice a week with a linen cloth, and after that time, once a week or fortnight with a hair cloth, which keeps it very clean, and makes it look well.

The third dairy woman makes her cheese exactly the same as the second, except scalding it, which she does in whey, and much hotter than the second, viz. nearly boiling; she also colours it in the following manner, viz. by rubbing a piece of the best Spanish arnotta upon a smooth stone, or bottom of an earthen pot, into a small quantity of milk till she has sufficient for the arnotta to colour the whole cheese; she then the puts arnotta through a fine lawn sieve into the cheese tub at the time she puts the rennet in. If in turning the cheese, when in press, she finds it not firm, she rubs a little salt upon it; the richer and better the milk is the more salt the cheese requires. In a good dairy nearly three hundred weight of cheese is made from each cow in the year. In this District, the cheese is always made from the new milk, consequently very little butter, and in conformity to the well known adage, "good butter and good cheese, are incompatible in the same dairy." But the ingenuity and frugality of those dairy women from whom I have transcribed their method of making cheese, added to their polite attention and readiness to oblige, enable me also to state their method of making

Whey butter.——*The first* gathers no butter from the green whey, but from the crushings which she sets up in pans for twenty-four hours, then skims off the cream or thick part, and immediately boils it; then before it is cold, she puts it into an earthen pan, in which she collects a week's cream for churning; she likes her cream to be sour, and for that purpose saves a little of the last week, which she puts in the bottom of the pot, and adds the next week's cream to it; she also puts her cream into the pot before it is cold, and in winter sets it near the fire; in summer she churns her milk and whey butter together; she also makes her milk cream as sour as possible. It has been recommended to her by an experienced mistress, to put a small quantity of saltpetre dissolved in water into her milk which she sets up for cream, as a good thing for making the milk throw up a greater quantity of cream, making it churn easier, and giving the butter a better colour; it was also told her it was a good thing for preventing the butter from having any disagreeable

taste, such as arise from the cow eating turnips, cabbage, &c. She has tried the experiment, by putting about the size of a hazle nut of saltpetre into as much cream as made six pounds of butter, and approves of it very much; but did not put it into the milk as advised, thinking it would spoil it for family uses.

The second sets up all her whey, as well green as white, for cream, which she gathers every twenty-four hours, into large earthen cream pots; she boils hers only twice a week, and differs from the first by wishing to keep it as sweet as possible, and for that purpose changes it into sweet pots twice a week; she gathers a small quantity of milk cream, which she churns together with the whey cream; her butter is very good and very little inferior to real milk butter.

The third gathers all her whey, as well green as white, into a large brass kettle, over a fire, and as the top or thick part begins to rise, she takes it off with a brass skimmer full of holes; when her whey is near boiling, she puts into it about a quart of cold spring water, and as much cold sour butter milk, which makes it throw up more top or thick curdy cream; she sets it by till cold, then puts it into her cream pots for churning; her cream pots have all tap-holes at the bottom, by which she twice a day draws off the thin whey that has settled there. She likes to keep her cream sweet, and for that purpose sets it in a cold place, and changes it into clean sweet cream pots every two days. In summer she churns her milk cream and whey cream together once a week; her butter is very good, and from her cheese being coloured, it always looks well, and she sells it for the best price in the market, and mostly to the same persons who have bought it before. Another mistress of a dairy, equal for her good management and civility, informs me that she sets both her green and white whey by for skimming twenty-four hours; when skimmed, she puts about a gallon or six quarts of boiling clean water to a panchion (an earthen vessel that holds about six quarts) of cream, and stirs them together well; the water will settle to the bottom, and when cold she takes the cream from it, and puts it into cream pots for churning; she stirs it well in the

cream pots once or twice a day, and changes it into clean ones twice a week, to keep the cream as sweet as possible. This is a very much approved mode of making whey butter.

In many parts of the kingdom, the method of making first cheese, and then butter from the whey, may appear curious, but in this district more butter is made from whey than from the cream of milk.

Barn Floors.

In laying plank floors in barns, a practice has been followed and communicated to me by a very intelligent gentleman, who has the management of large estates in the county of Derby, which I think preferable to our common method of laying them hollow, or bedded on chalk. He causes the earth to be taken out and replaced with stone or brick, laid in mortar, and grouted; in this foundation he rests the sleepers, and builds them firmly into it, perfectly level with the surface of the stone, the whole is again grouted, and the plank pinned down to the sleepers in the grout; he assures me, that plank floors laid in this way, will last more than double the time we usually reckon them to do when laid in the common way. And I am well satisfied, that lime burnt from Derbyshire stone, will preserve timber to a length of time, far beyond what at first sight we are apt to believe. I am not quite sure that lime burnt from chalk, has this quality in so great a degree, but I think oak floors laid in lime, more likely to last than in any other way I have seen practised. I proceed in the next place to

THE MEANS OF IMPROVEMENT.

In a large part of the county, denominated the King's-field, every miner has a power of entering at all times upon the lands, and searching for ores, and this even when the corn is growing: some restriction seems necessary. There is a period in the cultivation of all lands, that search might be made without much detriment to the owner of the land; but to search at all times must be a great clog to improvements; perhaps if an adequate compensation could be given, it would be for the good of the community to vest the mineral rights in the owners of the land: but as this respects the rights of individuals, it requires the wisdom of the legislature to suggest an adequate remedy. The subject of tenures leads me to say something

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On Tithes.

The collecting of tithes in kind has a tendency to damp improvement, but on one of the largest estates in the county of Derby, the agreeing for the tithes is left entirely between the clergy and the occupiers of the land; and although this is not the case on many other estates, yet it is matter of fact, that no estate in the county is in a better state of cultivation and improvement. So far as this goes, it is a proof that lands may be improved under the present system of tithes, where there is a moderation on the side of the clergy, and candour on the side of the farmers.

To render tithes less obnoxious than at present, the rights of the church more equitable, and to preserve individual rights sacred and inviolate, the clergy loved and honoured, and to keep up the happy influence of religion in the state, are objects well worth the attention of every good citizen. To effect this, where

the clergyman is not satisfied with a compensation equal to what the land would produce, without the aid of foreign manure, and where he insists on the full tenth of the produce in its improved state, perhaps the most probable means would be to oblige him to pay one-tenth part of the money *bona fide* expended in manures bought and laid on the land. Such a regulation would do away much of the reasonable objection to tithes, and be no diminution to the estates of the church; on the contrary, I think the *value* of her tithes would increase, and a flow given to the spirit of improvement, by the farmer knowing that a tenth of the money expended therein, was so much paid toward his tithe; give me leave to ask any Derbyshire farmer, who brings nine waggon loads of lime to his farm, if he would not bring a tenth were he sure the titheman must pay for it, if he took the tithe in kind? I am aware of many difficulties that may be thrown in the way of this scheme; the distinction of tithes, as belonging to rector and vicar; the impolicy of obliging a clergyman, whose circumstances might make it imprudent to expend money in the improvement of his tithes, and many others may be raised; but making it optional in the clergy to adopt this measure, or to be content with what he would get if no foreign manure were brought to the land, banishes many objections; and I have no doubt, if this scheme were taken up with candour on both sides, it might be matured into improvement and the good of the community.

The King's-field and tithes are among the greatest bars to improvement; to avoid letting the land to men engaged in other pursuits, or whose talents have not been applied to agriculture. To render every farm sufficiently large to employ both capital and talents, and so as to render agriculture as much a science as the manufacture of cotton, or any other science: to erect the necessary buildings; to provide for the comfort of the cottager at an easy expence, by allowing him to share in the cultivation of as much land as will supply his family with vegetables and milk; to remove every obstacle that stands in the way of a man that has made agriculture his profession, are, in my humble opinion, sure and rational methods of improving this, or

any other county. Observations on the local means which fell within my cognizance during my Tour, are the following.

In the Breed of Cattle.

By faithful and accurate experiments, to prove to mankind whether their improved breed of grazing cows can be made equally good for the dairy, with those that are more common, or to cross the breed, so as to get milk, and at the same time retain that blood and shape which gives them a propensity to fatten; and to extend the new Leicestershire breed of sheep, to all soils where they can get a sufficient quantity of food without much travel.

In the Fertile part of the County.

To increase the capital employed in agriculture, to pursue the examples that are now before them on the best managed farms, which I have had occasion already to mention, and to complete the inclosing of that small part which remains to be done.

In the Low Peak.

As their soil improves, to imitate the culture on the fertile soils; to complete the inclosures; and render the buildings commodious.

In the High Peak,

Natural difficulties are far more prominent than in either of the other districts:—the superabundance of the stone; the precipices; the scantiness of the soil; the exposure to the inclemency of the weather, deluged by rains; and its bleakness in the winter snows, are difficulties not easily overcome; but to attempt them, the following strikes me as the most rational method—to gain shelter, after the necessary buildings for a farm are erected, by planting with larch, Scotch fir, birch, and other forest trees suited to the nature of the soil, such parts as are inaccessible to the plough; by inclosing with proper hedges and

stone walls, after the manner practised in the northern parts of the kingdom; and raising quick fences by the assistance of stone walls. The superabundance of stone in Derbyshire, I think, makes the method described by the section (Fig. V.) the most eligible of any I can suggest. The advantage proposed by this method of inclosing, is shelter to be gained by planting; that the turf and mould arising out of the ditch added to that on the bank where the quick is intended to be planted, will make a sufficient staple to insure its growth; the shelter afforded by the stone wall is deemed a security for the quick, while it is incapable of defending itself, and from laying the stone in mortar to the height marked on the section, a more permanent advantage is expected; for after the dry wall is gone to decay, this part in mortar will remain, and prevent the escape of even a hare when the thorns have overtopped the walls. I saw many bleak situations in the High Peak, where if a good hedge were raised in this way, and shelter gained by planting, I have no doubt the land would improve to more than double its present value. After being inclosed in this manner, I should recommend the planting of such parts as are inaccessible to the plough. On that part where the plough can perform, I should wish to see the effect of

In the Limestone Soils,——removing no more stone than what cannot be mixed with the mould, and breaking it up so deep, that the plough, at 15 inches, will meet no obstruction from the solid rock; I should not object to any stone that the Hertfordshire plough can turn over being left in the soil, and in this state to mix the surface with peat moss, and a quantity of lime proportioned to the quantity of peat moss. In this state I should like to see the soil properly summer-fallowed, sown with turnips in due season, and after the turnips are fed off with sheep, the land stirred, and with a second stirring sown with barley or oats; with this crop of barley or oats the farmer should sow grass seeds adapted to the pasturage of bullocks, the pasturage of sheep, or the production of hay; as the circumstances, situation, and nature of the soil may render most prudent. The thin soils, on a strata of rock, I am persuaded would be greatly

improved by the introduction of sainfoin, especially in the neighbourhood of Buxton.

In the Gritstone Soil, I should like to see the same method pursued till you come to the mixing the surface with peat moss; here instead of peat moss, I should like to see the effect of a mixture of any, and every substance that would increase the staple, to add a due proportion of lime, always leaving rotted vegetables as a basis for lime.

In the Peat Moss, I should like to see the same process used, till you come to the mixing of the surface with soil; here to leave plenty of the stone, to lay clay or marle, and to add a large proportion of lime, I trust would produce effects that might surprise and please the farmer.

From want of local knowledge of the county, I do not know that all this has not been done; but where it has been done, I have no doubt the effects fairly communicated in the margin would be gratifying to the Board; and among the community at large, to me.

In the Soil that is so situated, where irrigation can be practised, and where the nature of the water has been ascertained, I should like to see the effect of the water being impregnated with mucus, arising from the drainage of towns, villages, or even single farm yards; and although this mucus or other matter be in very small proportion, when compared with the quantity of water, yet let not this prevent the experiment, even a little will change the nature of the water, and every little adds; but above all, whoever tries the experiment of irrigation, let him be sure the water is not too rapid, nor too long upon the surface.

In those soils where it is matter of doubt whether the improvement ought to be attempted, and carried on by ploughing, by feeding, or by planting, nothing but the local knowledge of the soil and situation can direct, and no man capable of improving can well be ignorant which to pursue.

In soils where paring and burning will improve, and which I conceive to be all soils where the coarser grasses grow spontaneous, great care must be taken not to pare nor burn too much;

I do not mean that it should not be pared and burnt, I mean that it should not be pared too thick, nor *exhausted too much by fire*; to destroy the roots and seeds of the coarser grasses are the only advantages rationally expected from paring and burning, except the substratum be a peat moss, or where there is no difficulty in the ashes finding a sufficient depth of soil to act as on a menstruum. Many well founded objections have been made to paring and burning, but more than half of them have arisen from exhausting the turf too much: paring too thick is not so objectionable, and especially where the mode of cropping finds an advantage by the turf being rolled instead of burnt; but the chief objection to paring and burning in Derbyshire arises from taking too many white crops after the operation; the land should certainly be rested with the second crop, or before the turf and ashes are exhausted; for want of this many bad effects have been produced.

In soils where planting is preferable, and great is the field for this improvement; bield or shelter for the stem is the great thing wanted, next to nutriment for the roots; here the superabundant stone wants but little alteration to give that bield or shelter; and every foot of this soil is a reproach to the inhabitants of the earth, if not turned to their advantage in this, of all others the most rational mode of improvement.

In all situations I am of opinion that perfect harmony subsisting between the owner and occupier are essential to all improvements, and this desirable end is never so effectually obtained as by leases. I am however free to own, that I have known good understanding maintained, and the farm improved from mutual good offices between landlord and tenant at will; but wherever this is the case, there must be a neighbourhood, and continual intercourse between them, that is not very common; if leases be granted, the obligations should be reciprocal. The tenant's rights and interest should be made the basis on which to build the improvement of the soil; due encouragement should be given, and in the improvement each ought to have a mutual interest: above all, not a word ought to be introduced that is not meant to be re-

ligiously observed. It is impossible to make the lease too plain and too well understood; the covenants ought to be calculated exactly to the soil and situation, and old forms and obsolete conditions carefully avoided. In a word, nothing but what is intended to be performed by the tenant should be introduced on his part; for give me leave to observe, that I have oftener known harm than good arise from granting a lease, and thinking no more about the conditions; the consequence is, the tenant begins to imagine "it is all nonsense," he looks more to the practice of his neighbour than to what he has promised under his own hand and seal. And after many years, the lease is resorted to, the covenants have all been broken, it is put into the hands of an attorney, and probably ends in a vexatious suit at law; or else the landlord is obliged to take his estate in such condition as the tenant leaves it, which probably is worse than it would have been if there had been no lease nor any misunderstanding about it.

I beg leave to conclude with remarking, that from the civilities I received in Derbyshire, I have no apprehension of any thing uncivil from any of its inhabitants in their marginal remarks; even those who may differ from me in opinion, I have no doubt will do it with much candour; they will please to recollect that the task of drawing up the present state of agriculture, and the means of its improvement in their district, devolved upon me with an eye to public utility, that it necessarily must involve *opinion*; and I can with much sincerity assure them, that what I have said originated in a desire to render Derbyshire and the community any mite of service in my power; if I am so fortunate as to succeed in the attempt, it will add very much to the pleasure I have already experienced in the civilities shown me by those who favoured me with their communications, and which I shall always remember with the most pleasing sensations.

ERRATA.

Page 9 line 1, leave out the period after the word *soil.*
— 12 — 12, for *county* read *country*.
— 17 — 28, for lands that are *not* deemed too wet, read lands that *are* deemed too wet.
— 18 — 33, after the word *clover* omit the dash, and go on with the remaining part of the sentence; and in the 34th line insert the dash after the word *soil.*
— 33 — 22, for *both* oats and barley, read oats *and* barley.
— 36 — 14, for the numerical number 49,379, read the decimal number 4,9379.
— 42 — 6, for coal *and* wood for fuel, read *coal*; wood for fuel.

APPENDIX

TO THE

AGRICULTURAL VI

OF THE COUNTY OF

DERBY.

APPENDIX.

ate of the number of Houses and Inhabitants in the County of Derby, according to Mr. Pilkington, in 1788.

B. In the Description, R, signifies Rectory; V, Vicarage; D C. Donative Curacy; C E, Chapel of Ease; H, Hamlet; T, Township; Vil, Village; Cu, Curacy; C, Chapelry.

DEANERY OF RIPPINGTON.

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of Inhabitants.
roxhall	-	V	4	
	Catton	H C E	4	
hilcote		-	14	
ppleby		-	59	
retton		R	15	
easham		D C	120	
	Donisthorp	Vil	18	
	Oxethorp	Vil	54	
ilsley		D C	7	
	Packington	Vil	32	
nunston		R		
ullington		V	50	
	Coton	H	60	
alton on Trent		R	60	
	Rosliston	C E	46	
resley	Church Gresley	D C	25	
	Castle Gresley	-	19	
	Swadlincoat	-	34	
	Linton	-	39	
	Drakelow	-	4	
apenhill		V	21	
	Newhall	H	49	
	Caldwell	H	16	
artshorn		R	76	406
ike		D C	13	
elbourn		V	286	1410
icknall		D C	175	
nton		R	31	
	Carried over -		1331	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. hab
	Brought over	-	1331	
Foremark -	- -	D C	26	
Repton -	-	D C	195	
	Milton -	H	26	
	Bretby -	C E		
Newton Solney	- -	D C	47	
	Winshill -	H	50	
Stanton near Dale -	- -	Cu	58	
Total in the Deanery of Rippington		-	1733	

DEANERY OF DERBY.

Smisby - -	- -	D C	47	
Aston - -	-	R	92	
	Shardlow -	H	54	
	Wilne -	H	8	
Weston -	- -	R	73	
Elvaston -	-	V	78	
Barrow - -	- -	V	43	
	Sinfin -	H	6	
	Arleston -	H	6	
	Slowston -	H	19	
	Twiford -	C	15	
Swarkston -	- -	R	38	
Willington -	- -	V	36	
Mickle over -	- -	V	76	
	Findern -	D C	62	
	Little Over -	D C	53	
	From 1680 to 1700, baptisms 178, burials 130 1760 to 1780, baptisms 237, burials 153			
Mackworth -	- -	V	64	
	Markeaton -	H	20	
Radbourn - -	- -	R	32	
Kirk Langley -	- -	R	60	
Mugginton -	- -	R	180	
Kedleston -	- -	R	19	
Scrapton -	- -		81	
	Carried over		1262	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of Inhabitants.
	Brought over	-	1156	
Borough of Derby All Saints	- -	Cu	532	2675
St. Peter's	- -	V	335	1926
St. Werburgh	-	V	398	1935
St. Alkmund	- -	V	244	1373
St. Michael	- -	V	128	654
	Quarndon -	C	53	
	Little Eaton -	H	39	
Derley	- -	-	47	
Little Chester	- -	-	33	
	Normanton -	C	31	
	Bolton - -	C	20	
	Litchurch -	H	8	
	Alvaston - -	C	54	
	Osmaston -	C	16	
Spondon	- -	V	158	
	Stanley -	C	41	
	Chaddesden -	C	126	
	Locko -	C		
	Dale, extra-parochial	-	52	
Ockbrook	- -	Cu	81	
	Burrowash -	H	33	
Sawley	- -	Cu	78	
	Wilne -	C	11	
	Long Eaton -	C	105	
	Breason -	C	61	
	Risley -	C	38	
	Draycot -	H	109	
	Hopwell -	H	4	
Sandiacre	- -	Cu	68	
West Hallam	- -	R	66	
Kirk Hallam	- -	V	8	
	Mapperly -	H	42	
Ilkeston	- -	V	272	
	Cotmenhay -	H	61	
	Little Hallam -	H	16	
Heanor	- -	V	22	
	Codnor -	H }	56	
	Loscoe -	H }		
	Langley -	H	24	
	Milnhay -	H	12	
	Shipley -	H		
	Heanor Wood -	H	39	
Morley	- -	R	50	260
	Smalley -	C	98	507
	Carried over		4825	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of h.
	Brought over		4825	
Horsley	- - -	V	102	
	Horsley Wood House	H	64	
	Kilburne -	H	50	
Breadsall -	-	R	58	
Allestry -	- -	D C	21	
Duffield -	- - -	V	208	
	Heage -	C	162	
	Belper -	C	433	
	Holebrook -	C	84	
	Turnditch -	C	30	
	Mackeney -	H	23	
	Hazzlewood -	H }	20	
	Windley -	H }		
	Shottle -	H }	107	
	Postern -	H }		
Crich -	- -	V	87	
	Codington -	H	19	
	Fritchly -	H	36	
	Wheatcroft -	H	19	
	Edge Moor -	H	14	
	Wessington -	H	29	
	Tansley -	H	29	
Pentridge -	-	V	90	
	Ripley -	H	140	
Blackwel -	-	V	73	
Brampton -	- -	Cu	325	
		Total	7048	

DEANERY OF CASTILLAR.

Chellaston -	- -	D C	42	
Egginton -	- -	R	51	
Marston -	- -	V	129	
Sudbury -	- -	R	66	
Doveridge -	-	V	145	
Somersall -	-	R	17	
Cubley -	- -	R	60	
	Marston Montgomery	C	71	
Boylston -	- -	R	50	
Sutton on the Hill	-	V	78	
	Carried over		709	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of habita
	Brought over -	-	709	
Etwall -	-	V	70	
	Burnaston -	H	32	
	Barrowcoat -	H	4	
Church Broughton	- -	V	48	
Dalbury -	-	R	37	
Trusley -	- -	R	10	
Barton -	-	R	5	
Longford -	-	R }	60	
	Longford -	H }		
	Hollington -	H	21	
	Roodsley -	H	21	
	Alkmonton -	H	11	
	Bentley -	H	9	
Brailsford -	-	R	114	
	Ostmaston -	H	34	
Shirley -	-	V }	43	
	Yeavely -	C }		
Denby -	- -	Cu	138	
	Total		1366	

DEANERY OF ASHBOURN.

Norbury -	- -	R	43	
	Snelson -	C	67	
Edlaston -	-	R	34	
Ashbourn -	-	V	480	
	Clifton -	C	24	
	Croft and underwood	C	34	
	Yeldersley -	C	6	
	Hulland -	C	39	
	Alsop - -	C	11	
	Parwich -	C	91	
Mapleton -	-	R	32	16
Fenney Bentley -	-	R	26	13
Thorp -	- -	R	28	
Hartington - -	Town quarter -	V	63	33
	Lower quarter -	T	56	28
	Middle quarter -	T	70	33
	Upper quarter -	T	130	
	Carried over		1234	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. ha
	Brought over -	-	1234	
Bradbourn -	- -	V	32	
	Atlow -	C	24	
	Ballington -	C	14	
	Aldwark -	T	18	
	Brassington -	C	130	
Hognaston -	-	R	52	
Bradley -	-	R	46	
Tissington -	-	C	44	
Kirk Ireton -	-	R	120	
Carsington -	-	R	46	
Worksworth -	The town -	T	486	
	The rest of the township	T	162	
	Alderwashley -	C	57	
	Cromford -	H	120	
	Middleton -	H	64	
	Ibol and Grange -	T	23	
	Hopton -	H		
	Caulow -	H	12	
	Biggen -	-	23	
	Aiton - -	-	4	
	Hitheridge Hay	-	20	
	Ashley Hay -	-	20	
Bonsall -	- -	R	240	
Matlock -	-	R	373	
	Total		3364	

DEANERY OF CHESTERFIELD.

Southwingfield -	- -	V	127	
Alfarton -	The town -	V	182	
	Rest of the parish		262	
Pinxton -	-	R	70	
South Normanton -	- -	V	121	
Tibshelf -	- -	V	115	
Shirland (including part of the hamlets of Stretton and Higham)	- -	R	176	
Morton -	-	R	24	
	Blackenfield -	H	30	
North Wingfield -	- -	R	30	
	Williamthorp -	H	10	
	Carried over		1147	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	N in
	Brought over -	-	1147	
North Wingfield cont.	Pilsley. -	H	42	
	Stretton -	H	31	
	Ford - -	H	25	
	Hanley -	H	14	
	Clay-cross - -	H	46	
	Tupton and Woodthorp	H	60	
	Ainmoor - -	H	19	
Ashover -	- - -	R	321	
	Dethick -	C	3	
	Lea - -	H	27	
	Holloway -	H	14	
Wingerworth -	- -	Cu	61	
Chesterfield -	- - -	V	801	
	Brimington -	C	80	
	Temple Normanton	C	25	
	Newbold -	C	119	
	Dunstone - -	H		
	Walton - -	H	75	
	Tupton -	H	22	
	Calow - -	H	44	
	Hasland -	H	97	
Sutton in le Dale -	- -	R	23	
	Duckmanton -	H	53	
Heath - -	- - -	V	64	
Hucknall -	- -	V	32	
	Stanesby -	H		
	Rowthorn -	H	14	
	Astwood -	H	28	
	Arstaff -	H	24	
	Hardwick -	H	2	
Pleasely - -	- -	R	82	
Over Langwith -	- - -	R	24	
Scarcliff -	- -	V	82	
Bolsover -	-	V	217	
	Glapwell -	H	19	
Elmton -	-	V		
	Cresswell -	H	52	
Whitwell -	-	R	138	
Clown - -	- -	R	78	
Balborough -	-	R	128	
Stavely -	-	R		
	Netherthorp -	H	250	
	Woodthorp -	H		
	The three Hanlys	H		
	Carried over		4383	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses	No. of Families
	Brought over		4383	
Stavely continued	Barlow	C	157	
Whittington		R	134	
Eckington		R	172	
	Kilmarsh	C	277	
	Renishaw	H	78	
	Trowey	H	168	
	Ridgeway	H		
	Mossborough	H	98	
Beighton		V	58	
	Hackenthorp	H	33	
	Southwell	H	16	
	Berley	H	8	
Norton		V		
	Great Norton	Vil	278	
	Beauchief	H		
Dronfield		V	171	
	Dore	C	35	
	Holmesfield	C	56	
	Hiltop	Vil	8	
	Stubley	Vil	17	
	Woodhouse	Vil	19	
	Totley	Vil	21	
	Unstone	Vil	49	
	Cole Aston	Vil	46	
	Little Barrow	Vil	10	
	Total		6272	

ARCHDEACONRY OF DERBY.

Hathersage		V	90	
	Outsets	Vil	27	
	Bamford	Vil	25	
	Derwent	C	26	
	Stoney Middleton	H	104	
	Peak Forest	C	95	
Hope		V	56	
	Bradwell	Vil	190	
Hope	Brough and Shapton	Vil	10	
	Aston	Vil	7	
	Thornhill	Vil	13	
	Woodlands	Vil	35	
	Highton	Vil	7	
	Carried over		685	

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of habitan
	Brought over -	-	685	
Hope continued	Offerton - -	Vil	5	
	Abney and Grange	Vil	30	
	Fernulegh -	Vil	32	
	Wardlow -	Vil	22	
	Stokehall -	Vil	1	
	Grindlow -	Vil	30	
	Great Hucklow -	Vil	43	
	Little Hucklow -	Vil	45	
	Whaley and Dovehole	Vil	7	
	Fairfield -	C	63	27
Castleton -	- -	V	182	
	Edale -	H	66	
Glossop -	- -	V	90	
	Hayfield -	C }	565	
	Mellor - -	C }		
	Chinley -	L	154	
	Padfield -	L	21	
	Hadfield -	L	42	
	Dinting -	L	20	
	Whitfield -	L	50	
	Chunal -	L	8	
	Simondly -	L	34	
	Charlesworth	C	68	
	Chisworth -	C	20	
	Ludiworth -	C	49	
Chapel le Frith -	- -	DC	420	
Tideswell -	- -	V	254	100
	Litton -	H	74	34
	Wormhill -	H	29	
	Millhouse Dale	H	10	
	Hargate Wall -	H	6	
	Dale Head -	H	6	
	Weston -	H	13	
	Tunstead -	H	9	
	Meadow -	H	5	
	Great Rocks -	H	4	
	Upper End -	H	6	
Eyam -	-	R	180	91
	Folow and Grindlow	Vil	94	
	Woodlands -	Vil	40	
	Grindleford -	Vil	24	
Edensor -	- -	V	85	
	Pilsley -	H	30	
Bakewell -	- -	V	192	93
	Ashford -	C	119	54
	Netherdale -	C	6	
	Baslow -	C	117	
	Carried over		4055	

	Hamlet or other subdivision.	Description.	No. of Houses.	No. of h
	Brought over -	-	4055	
inued	Curbar -	H	42	
	Bubnal -	H	24	
	Froggat -	H	19	
	Great Longsden -	H	75	
	Little Longsden -	H	23	
	Sheldon -	H	33	
	Taddington -	H	63	
	Moneyash -	H	53	
	Chelmorton -	H	40	
	Buxton -	H	77	
	Beely -	H	54	
	Upper Haddon -	H	40	
	Great Rowsley -	H	30	
	Hassop -	H	13	
	Rowland -	H	29	
	Calver -	H	85	
	Wardlow -	H	18	
	Flag -	H	29	
	Blackwell -	H	7	
	Cowdale -	H	6	
	Staden -	H	6	
	Country Houses -	-	20	
-	- -	R	136	
	Winster -	C	218	
	Elton -	C	82	
	Alport -	H	22	
	Birchover -	H	70	
	Stanton -	H	64	
	Middleton -	H	45	
-	-	R	381	
	Total		5859	

TALS OF EACH DEANERY, &c. COLLECTED

Deanery, &c.	No. of Houses.
Deanery of Rippington -	1733
——— Derby -	7048
——— Castillar -	1366
——— Ashbourn -	3364
——— Chesterfield -	6272
Archdeaconry of Derby -	5859
Total	25642 Houses

rby, which at the rate of 4.9375 (nearly five to each hou
ned in page 36, will make the total number of souls in
, amount to about 125,000.

THE END.

GENE

AGRIC

COUNTY O

Parish.	Hamlet or other subdivision.	Description.	No. of Houses.	No. of Inhabitants.
	Brought over -	-	4055	
Bakewell continued	Curbar -	H	42	
	Bubnal -	H	24	
	Froggat -	H	19	
	Great Longsden -	H	75	
	Little Longsden -	H	23	
	Sheldon -	H	33	
	Taddington -	H	63	
	Moneyash -	H	53	
	Chelmorton -	H	40	
	Buxton -	H	77	238
	Beely -	H	54	
	Upper Haddon -	H	40	
	Great Rowsley -	H	30	
	Hassop -	H	13	
	Rowland -	H	29	
	Calver -	H	85	
	Wardlow -	H	18	
	Flag -	H	29	
	Blackwell -	H	7	
	Cowdale -	H	6	
	Staden -	H	6	
	Country Houses -	-	20	
Youlgrave -	- -	R	136	614
	Winster -	C	218	
	Elton -	C	82	
	Alport -	H	22	
	Birchover -	H	70	
	Stanton -	H	64	
	Middleton -	H	45	
Darley -	-	R	381	
	Total		5859	

TOTALS OF EACH DEANERY, &c. COLLECTED.

Deanery, &c.	No. of Houses.
Deanery of Rippington -	1733
——— Derby -	7048
——— Castillar -	1366
——— Ashbourn -	3364
——— Chesterfield -	6272
Archdeaconry of Derby -	5859
Total	25642

Houses in the county of Derby, which at the rate of 4.9375 (nearly five to each house), as I have mentioned in page 36, will make the total number of souls in this district, in 1788, amount to about 125,000.

THE END.

GENERAL VIEW

OF THE

AGRICULTURE

OF THE

COUNTY OF HEREFORD

GENERAL VIEW

OF THE

AGRICULTURE

OF THE

COUNTY OF HEREF

WITH

OBSERVATIONS ON THE MEANS OF ITS IMPR

By JOHN CLARK,

OF BUILTH, BRECONSHIRE.

DRAWN UP FOR THE CONSIDERATION OF THE BOARD O
AND INTERNAL IMPROVEMENT.

LONDON:

PRINTED BY COLIN MACRAE.

v.4
no.5

TO THE READER.

IT is requested that this paper, may be returned to the Agriculture, at its Office in London, with any additional and observations which may occur on the perusal, *writt margin*, as soon as may be convenient.

It is hardly necessary to add, that the Board does not itself responsible for any fact or observation contained in port, which at present is printed and circulated for the merely, of procuring farther information respecting the h of this district, and of enabling every one, to contribute to the improvement of the country.

The Board has adopted the same plan, in regard to all counties in the united kingdom; and will be happy to gi assistance in its power, to any person, who may be desiro proving his breed of cattle, sheep, &c. or of trying an experiment in Husbandry.

LONDON, MAY, 1794.

HEREFORDSHIRE.

INTRODUCTION.

AN inland county, bounded on the east by the counties of Worcester and Gloucester, on the south by the county of Monmouth, on the west by the counties of Brecon and Radnor, and on the north by the county of Salop. From the south end, the junction of the counties of Monmouth and Gloucester, to the north end, at Maoktree Common, the greatest length of the county is 45 miles. From the junction of this county with Breconshire at Hay, to the junction of the counties of Worcester and Gloucester, at the Malvern Hills, the greatest breadth is 39 miles. Being, however, of a circular form, we may take the medium length at 37, and the breadth at 33 miles, which will give 1221 square miles, or 781,440 statute acres. It is situate within the diocese of its own name, and gives the title of Primo Vis-count of England to the head of the ancient family of Devereux.

Eight* compose its quota of the representatives of the Commons of Great Britain in Parliament, 480 that of the national militia.

The county contains eleven hundreds, viz. Broxash, Ewias-lacy, Greytree, Grimsworth, Huntington, Radlow Stretford, Webtree, Wigmore, Wolphy, and Wormlow.

The

* Two for the county, two for the city of Hereford, two for the borough of Leominster, and two for the borough of Weobley.

The number of its parishes is 176. Besides its city and two boroughs, it contains other four market towns---Ross, Bromyard, Ledbury, and Kington. The number of its inhabitants may be estimated at 90,000.

The county of Hereford is equalled by few spots in the island of Great Britain for the production of every article that can contribute to the comfort, the happiness, and, in some degree, the luxury of society. Here a verdure almost perpetually reigns. The wide flats, extended for many miles, are clothed in nature's fairest robes, and enriched by a profuse distribution of her most chosen gifts. When the hills rear their mild heads, they do it, seemingly, with a view to captivate the eye by their sylvian charms, and invite the traveller to partake of an air less luxuriant and satiating than that of the plains below. On the flats the atmosphere is so loaded with the riches which it collects from the sweet scented herbs around, that the inhailed air gives a glow of health and vigour to the surrounding vegetables on which it breathes; hence the ancients, with much propriety, complimented this favourable district with the appellation of the GARDEN OF ENGLAND.

The Climate---of this district is remarkably mild. This is partly owing to the soil, partly to the situation. The soil of the hills (which have always an influence on the climate of the districts that surround them) is here a light kindly *sandy mould*. This kind of earth readily admits the entrance of the sun and air, by which means the cold superabundant moisture of winter is soon exhaled, and the earth, by that means, enabled to admit the *operation of vegetation* more early in the spring than other places lying in the same latitude, that have the soil of a more retentive nature. Stiff clays, by shutting out these *friendly guests*, and by their strong attachment to moisture, require a more increased degree of heat in the sun to drive from their brows the surly frown

of winter. The *subsoil* of the hills is well calculated to give effect to the kindly exertions of the *superficial*. The stone that compose the mountains, is either of the *siliceous* or *calcareous* genus. These, from their readiness to part with moisture, harbour no *obnoxious damps* to chill and poison the roots of the plants.

The *situation* of *most* of this county is so placed as to add, in some degree, to the mildness of the climate and the fertility of the soil. It is sheltered in a great measure, on the north-west and south-west, by a *border* of a mountainous district.

Most of the long continued rains, in this quarter of the kingdom, are from a *south-west* point. The Welsh mountains, which are situate in that point, by their great elevation, partly intercept, and partly attract the clouds in wet weather, and by stripping them of a portion of that superabundant moisture with which they are charged, may contribute to the mildness of this district.

The *features of the country* exhibit a striking variety of beauties, but it all partakes of that variety from which every idea of inferiority is excluded: no barren spot, that by the humility of its deportment would form a contrast to the general claim to pre-eminence. The idea of *richness* is *rather prevalent*, and apt to over-awe the mind by that self-sufficiency, and those assumed airs of superiority, of which it is, perhaps, not easy for Wealth to divest herself. Cornfields, meadows, orchards, extended lawns, and hop-grounds, satiate the eye by one continued scene of luxury.

From the top of any part of that range of hills called *Dinmore*, between Leominster and Hereford, this county may be viewed to much advantage, so far as its *agricultural wealth* can be examined; indeed any other eminence within the county will serve the same purpose. It is, in fact, of very little importance from what station it is viewed, so that it can be seen; for when there is no natural naked-

ness to cover, nothing can be seen from any position, which the traveller would not wish to view.

The river and brooks may be traced by the borders of wood with which their various turnings and windings are enameled. The numerous seats of the nobility and gentry, environed by their respective plantations, dispersed in various directions over the extended prospect, decorate the scene with considerable elegance; whilst the proprietors of these splendid mansions, by their *personal* residence, confer a dignity upon the district, and by their countenance and example strengthen and invigorate the spirit of its agriculture. The contemplative mind is here in a peculiar degree gratified, by the pleasant reflection, that the husbandman, in this county, seldom toils for an absent landlord; equally a stranger to the vices and the virtues of his tenants, equally indifferent whether happiness or misery be their lot, so that his rents are regularly remitted—the fate of too many inhabiting districts, which do not, like this, hold forth an inducement for the residence of the wealthy.

On whatever side the spectator turns his eyes, the prospect before him is equally inviting; whether to gratify the fanciful sallies of a wandering taste, by their external charms, or the daily demands, and more peremptory cravings of human wants, by their store of internal wealth. The GENTLEMEN's seats, where Art occasionally steals, imperceptibly, to assist Nature in her endeavours to please, gives the spectator an idea of *taste*. The farm-house, surrounded by large fields of yellow corn, green meadows, blooming orchards, and wide lawns covered with herds of cattle, that of *wealth:* the towering spire and neat village, that of *devotion* and *decorum:* and, what is peculiarly gratifying to the humane mind, the cottage gives the idea of *comfort*.

Although there is a great deal of wood to be seen in, almost, every direction, yet, it is not of that description that is termed a *forest*; which, in such a soil, would be apt to throw

throw a gloom over the dejected mind, from the unpleasant reflection, that the gratification of the eye was purchased at too high a price, by excluding the operation of the plough and the scythe from the spot where it grew, thereby lessening the more substantial and the more requisite comforts of society, by lessening the means of subsistence. Scarce a wood, a clump, or even a single tree, is to be seen in any situation from which the most wary prudence, or the most rigid public œconomy, would even wish to see it excluded.

There is, at the same time, a great deal of very valuable timber in this county, but it is so happily disposed of over the district, that it seems scarcely to interfere with the more substantial concerns of agriculture. Most of the timber is planted in hedge rows, round large fields of forty or fifty acres ; in clumps, on the tops of gentle knowls ; or in weaving clouds, sometimes adorning the sides, and frequently the summit of the highest hills.

On viewing this county from the summit of any of its hills, the idea presented to the spectator, on either side, is that of an extended flat ; but when he descends to the plains below, he finds the face of the country to be very different from what it seemed to be from the former station. On examination he finds what seemed a flat to be gentle swells, resembling small *segments* seemingly cut off a large globe. From the summit of these swells the water runs towards every point of the compass. These elevations are of no small advantage to the agriculture of the country. The soil, in many parts of the bottom, is a strong clay : had the face of the country, therefore, been level, the surface water might have chilled the land ; but here the water runs off immediately, from the general unevenness of the surface.

Rivers.—The Wye is the only river of which this county can boast, although the Lugg is sometimes honoured with that appellation by the natives.

The Wye rises from Plinlimon hills, in Montgomeryshire, and entering Radnorshire at Cefinycoed, passeth through that county, until it receives the Elan, two miles below Rhaydergowy. From thence it separates the counties of Brecon and Radnor to Hay, a distance of thirty-three miles. Leaving Breconshire at Hay, and Radnorshire at Rhydspence, two miles lower, it enters this county with a slow but majestic pace. The Wye having now travelled sixty miles from its source, is strengthened and augmented to no small size by the wealth which it has collected from a large district of hills and vallies on either side, whose numerous rivers and streams have united to add to its importance, by consigning to it, at once, their respective contents, and their respective names.

The Wye moves slowly through this county, by the city of Hereford and market town of Ross, until it reaches Gloucestershire; then by Monmouth to Cheapstow, where it joins the Severn *sea*, disdaining to resign its contents to any other stream.

The Wye is neither beneficial or hurtful to the agriculture of this county, in any considerable degree. To the city of Hereford, and its vicinity, it is of service, as coal and other heavy articles are brought there from the forest of Dean and Bristol. It also enables the inhabitants to send cyder, bark, timber, &c. back by the same conveyance to the Severn: even the counties of Brecon and Radnor derive some little benefit from the Wye, as it is in floods navigable six miles above Hay.

Although the Wye is too haughty to yield to the husbandman's wish, by submitting to be turned over his meadows, yet here are other streams more humble and more useful,

that are quite tractable, from whose invigorating streams the farmer derives no small portion of wealth.

The Lugg rises in Radnorshire, near Llangunllo, and entering this county near Presteign, and passing by Leominster, empties itself into the Wye below the city, after having for twenty-five miles, watered a district, which, taking it all in all, is perhaps not to be equalled by any other in this island, of equal extent.

The Arrow, a beautiful little stream, rises near Gladstree in Radnorshire; it passes through Kington, and flooding many thousand acres of rich meadows, joins the Lugg below Leominster. The water of the Arrow is found to be uncommonly beneficial to the land over which it is turned. This is not to be wondered at, when it is remarked, that the water springs from hills that are mostly composed of a calcareous or a siliceous stone; and as the land it passes over strips the water of the particles with which it is charged, that large portion of tillage ground, from whence it collects the surface water, affords that stream in all floods so ample a supply of rich terrene matter, that in place of the waters being exhausted by passing over so large a portion of ground, it is continually getting richer and more luxuriant every field it traverses.

The soil of this county is very different, and the difference often becomes striking in the space of a few yards only; from a strong clayey to the kindly sandy mould: yet all are rich, productive, and wonderfully adapted by nature for the nourishment of the different species of vegetables which she had destined to become the tenants of these different species of soils.

Excepting the skirts of this county, on the south, all the land that has a sufficient quantity of sand in its composition is, in a very high degree, friendly to vegetation: the only defect to which the soil inclines, is, when it contains too large a proportion of clay. But although the

soil be often stiff here, it does not come under the description of what it is called in some places, " poor stiff clay." This is easily accounted for, because

The sub-soil uniformly partakes of the nature of the *superficial.* No stratum of poisonous *tell,* hostile to vegetation, lurks beneath the plough, to intimidate the farmer from a deep furrow; nor to send up its offensive moisture to contaminate the roots of the plants, and chill their growth.

The size of the farms is in general pretty extensive, from 400l. to 500l the large, and from 50l. to 100l. the small. Grain and hop are the crops, and neat cattle the stock to which the farmer must look for support. Sheep and pigs are also articles of some importance. Cyder, it is true, forms a very extensive branch of the wealth of this county. This, however, is an article upon which the farmer must not lay any considerable stress: for, even when *a hit* does take place, there are a number of avenues, besides the farmer's *pockets,* with gaping mouths ready to swallow the production of his blooming orchards. This forms at best but a precarious property, upon which prudence forbids any *material* dependance to be laid.

The principal part of the land is employed in tillage. The most intelligent farmers say, that there is too large a proportion under corn. It is calculated in general that two-thirds of the farms are thus employed: one-third is too small a proportion for meadow and pasture; since rearing more than they now do, of their own inestimable breed of neat cattle, would pay better than grain.

This, like many other evils, might have originated in the nature of the common fields. There a man must keep his land in tillage, which might have contributed to render this a corn county *first,* and even after inclosures had taken place, the practice was still continued. Habits once established are not easily eradicated.

The

The following are the particulars of a good farmer, on a farm that comes under the denomination of light land, situate on the north side of the county. The whole farm contains 500 acres.

		STOCK.	
Wheat	40 Acres	Sheep - - - - -	400
Barley	40 ditto	Stall-fed cattle - -	20
Pease	40 ditto	Milk cows - - -	17
Turnips	30 ditto	Calves reared - -	12
Oats	30 ditto	3 or 4 broad mares, pigs, &c.	
Clover	40 ditto		

Statute acres, 220 in tillage, and 280 acres in hay and pasture gound, orchards, hop-yards, &c.

Rotation of Crops on this Farm.

1. year, wheat, on clover ley, of one year's standing.

2. year, barley or oats; sow clover; that is, if the land be in good heart, sow barley; but if in bad, then oats.

3. year, clover.

4. year, fallow and turnips.

5. year, barley or oats; sow clover.

6. year, clover. Let the land lie sometimes three or four years in pasture, then break it up again, sow pease next year; when the pease is cut, muck and lime for Michaelmas wheat, then barley, &c.

This is a light soil, therefore sow no beans; all the good bottom land is kept in meadow and pasture, and the hilly part of the farm *only* is thus used in tillage.

This spirited farmer deserves the more credit, because his land is a dry hill, which, in the hands of the common run of farmers, would have been suffered to carry gorse and briars. There is no difference in the system here, because all the land is of the same degree of lightness, or, nearly so.

The rotations on the north side of the county, where the soil is mostly of clay, are on——

SANDY LAND,

1. year, sow wheat on clover ley.
2. year, pease or oats.
3. year, turnips.
4. year, barley, sow clover.

CLAYEY LANDS.

1. year, pease on clover ley.
2. year, wheat.
3. year, a fallow if the land be in bad heart; but if in good condition, oats or pease, then a fallow.

SHOBDON COURT.

1. year, turnips.
2. year, barley, sow clover.
3. year, clover.
4. year, wheat.
5. year, beans or pease.
6. year, wheat.
7. year, turnips.

Such is the system practised by the Lord Lieutenant of the County, * who is himself one of the greatest farmers in it, holding in his own hands from 800l. to a 1000l. a year.

This immense tract of land is employed, not merely in *parks* and *pleasure grounds*, but in the manner that is most likely to produce the greatest possible quantity of food for society. The quantity is indeed so considerable, that it almost bids defiance

* Viscount Bateman.

defiance even to the hospitality of SHOBDON COURT. I do not find, however, that any thing is SOLD, except some live stock.

It is not possible for me, in this short sketch, to enter into the *minutiæ* of his lordship's practice as a "FARMER," (an appellation by which he condescends to distinguish himself) *that* is perhaps equalled, at least, by some others in the same neighbourhood. But the EFFECT which his countenance, and his ranking himself of the *profession*, has had upon the AGRICULTURAL ASPECT of that quarter of the county, forms a striking contrast to that of some other corners more favoured by nature in respect to the fertility of the soil.

It is worthy of remark, that the *noble farmer* is also *poor house-keeper* of the parish. The consequence is, that in place of six or seven shillings in the pound of poor's rate, it is only nine-pence!!!—and not three-pence in the *real rent*.

It is scarcely necessary to add, that the poor are more comfortably maintained than probably any equal number of the same station in the kingdom. Every one that is able to work is employed on the farm. The children are taught the different branches of agriculture; and such as are of a *delicate* constituion are bound to trades, and at a proper age sent out to masters, to make room for others. Was the example of the HEAD of *the parish of* SHOBDON followed by men of landed property throughout the kingdom, we should seldom hear of the *poor's* envying the *rich*, as they would then be *employed*, not *oppressed*.

The *rotation of crops* varies much in different quarters of the county. In the rye-lands the old system was, 1. a fallow, 2. wheat, 3. barley, 4. pease, 5. barley, and 6. and 7. rye-grass and clover. But some of the superior managers are now beginning to introduce the Norfolk husbandry on the lighter sandy soil.

On some of the clay lands, north of the city, the rota-

tion is, 1. a fallow, 2. wheat, 3. pease, 4. a fallow, 5. wheat, 6. barley, and sow clover.

In all the common fields, and in that district called Wheatland, the rotation is, 1. a fallow, 2. wheat, 3. beans, 4. a fallow again. In the inclosed fields, a little barley and oats, and laid down with grass seeds. Barley and oats are, however, no great favourites in *this* soil. But that quarter of the county, of which Ross may be called the center, yields crops of barley, which, in *quantity* and *quality*, is seldom surpassed in any part of the kingdom. This quarter of the county is also very favourable to the growth of turnips, which, among other advantages, admits of their being eat off the land, a benefit from which clayey lands are excluded, on account of their superabundant moisture in winter and spring. The cultivation of that valuable plant is, notwithstanding, gaining ground on all soils within the district. In the south quarter of the county, in the Golden Valley especially, the system of the old school, which mostly still prevails, is, 1. on clover ley, wheat, 2. pease, 3. a fallow, 4. wheat, 5. barley and clover; then the same invariable rotation over again.

Since the introduction of turnips into this quarter, some of the best farmers have begun a system rather more rational:—Thus: 1. oats, 2. turnips, 3. pease, 4. wheat, 5. barley, sow clover. This system is called here *rational* only, because it is *less* absurd than the following, which is not uncommon; 1. oats, 2. a fallow and turnips, 3. a whole summer's fallow, sow Michaelmas wheat, 4. wheat, 5. barley, sow clover.

In *some* quarters of the kingdom, the Writer would expect his veracity to be called in question, when he mentions a circumstance so improbable as a *whole* summer's fallow *after* turnips. It is, indeed, with much reluctance that he relates a circumstance so disgraceful to the agriculture of so very respectable a county.

The

The turnips are *not* hoed; yet notwithstanding this unpardonable neglect, they have generally a good crop; the natural strength of the land enabling it to produce a large crop of turnips, and *also* a large crop of weeds. The land made *kind* by the fallow for turnips, prepares the soil for receiving the *seeds* of the *weeds* with uncommon advantage to their further prosperity; and their vigorous offspring will prevent the possibility of sowing barley the succeeding year, with any prospect of success! To remedy this evil, a whole year's fallow takes place; hence a crop of barley is lost, and *four* ploughings and harrowings are requisite to destroy these *weeds*, which, while the turnips were in the ground, might have been done at an expence not exceeding six or eight shillings an acre: yet I have heard it *gravely* maintained, that this was the best mode of husbandry, and that some of the best farmers in the county followed it, from a conviction of its utility. I am sorry to be obliged to confess, that I have seen this practice followed by men of great respectability and worth; but that they are the *best* farmers in the county, remains to be proved. For it is with pleasure I add, that I have met with farmers in the county who would spurn so slovenly a practice with the most pointed indignation. *

The cultivation of turnips has been but recently introduced into this district. It was found that a good crop of turnips could be had *without hoeing*. The eye *thus* fixed on the *present*, gain seems to have lost sight of the *future* pro-

 spect.

* A fund, raised by a subscription among the land-owners in the county, to be distributed annually among the tenants of the *subscribers* for the best crop of *hoed turnips*, would be attended with consequences beneficial to themselves and the public.

The *farms* might be divided into *ten* classes, from 500l. and upwards, down to 50l. a year; and one or more premiums to be given to each class: this would give the *little* farmer a *chance*, by contending with rivals of *equal* strength to his own.

spect. When barley was sown after unhoed turnips, th crop, *choaked up by the weeds*, was found to be unproductive. Hence the practice was given up, and the fault was assigned to some defect in the *soil*, and not to the real cause, the *superabundance* of the *weeds*.

There is a principle inherent in the human mind, which proves rather an obstacle to any rapid improvement in agriculture; I mean that species of *pride* that prompts a man to support *his own practice* like *his own argument*, be it right or wrong.

Produce of the different Grains.---Wheat on the skirts of the county; the quantity is 160, and on the richer lands 200 gallons per acre. * When the strength of the soil and the mildness of the climate are duly considered, this quantity will appear very small. The land of this county has been long noticed as being uncommonly congenial to the growth of *wheat*, the quality of which is admitted to be superior to that produced by the surrounding districts. Hence it would seem, that the smallness of the quantity ought to be attributed to some other cause than either the soil or the climate. If so, it must follow as a consequence that the defect is occasioned by a quick repetition of exhausting crops, without the requisite application of proper manures; or what is more likely, by a deficiency of tillage, and suffering the weeds to appropriate to themselves a part of that food which ought to be wholly reserved for the support of the wheat.

Barley.---The major part of this county being composed of a clavey soil, the cultivation of barley is not very general. On the south side of the county, where the soil is inclined to be sandy, barley, however, is a principal article. The produce may be 300 gallons an acre, but in the Ross quarter much more.

Pulse.

* This alludes to the general run of the county; for 300 gallons is not uncommon on WYE SIDE.

Pulse---whether pease or beans, are sown *broad-cast.* The strong clayey soil is well adapted for this species of crop; yet from the quantity produced, the fact would seem to be otherwise, since the average produce cannot be estimated at more than 200 gallons per statute acre. This is not to be wondered at, considering that they are sown broad-cast in the spring, and left to share the land with flourishing crops of luxuriant weeds, who, being the ancient natives of the soil, come in for more than their share.

Beans—are sometimes set, but not in regular rows, with an intention to keep the land clean by hoeing. The principal advantage therefore seems to be, that the birds cannot pick up the seed, and that the saving in the quantity of the seed sown will pay the women's wages for *setting*, and something more.

Some of the most intelligent men in this county admit, and lament the foulness of their corn lands; but give the quantity of work to be done, and the scarcity of hands, as a reason. Here are *four harvests*, the hay, the corn, the hop, and the cider.

From an attentive examination of the natural fertility of the soil, compared with the small return of grain which the district under review yields to the occupier, a train of unwelcome reflections obtrude themselves on the dejected mind.

Nature has been so lavish of her gifts in the *decoration* as well as the *endowment* of this county, that he must be a surly moralist indeed, who would feel himself inclined, while he was contemplating such scenery, to utter the hostile language of censure, or to whisper the grumbling murmurs of discontent. That degree of admiration to which the *natural* fertility of the soil is so justly entitled, must, however, be considerably abated when we come to look at the *industry of man*, and to examine the propriety of those means which he has employed in order to convert to his own use, by the proper cul-

tivation

tivation of the soil, that inexhaustible store of wealth which nature had deposited there for his use.—Lime may be at too great a distance, roads may be bad, and manure, beyond a certain quantity, may not, in some situations, be had: but there is a certain species of improvement which is always to be had, and which the arable ground here stands more in need of than any other, that is, *tillage*. Although this be a species of manure always at hand; yet few are the fields that are not languishing for want of it. Here is no bad breed of cart horses, and a breed of work oxen not to be equalled in the kingdom. No want of good provender to give them. Why then are the lands left half ploughed, and a disgrace to the county? Indolence is the insurmountable obstacle, a companion that is not easily shaken off.

But although man *be indolent*, *nature is active*; every spot of ground that he neglects, *she* appropriates to some use. HER family is numerous; she finds a tenant for every soil. Hence upon the best lands we find the thistle, nettle, couch, dock, ragwort, maywide, wormwood, wild mustard poppies, with an hundred others of the same *active tribe*, which nature seems to have sent as *overseers* to watch the *sluggard*, and to punish his idleness, by converting to their own use that wealth which the farmer's indolence has suffered him to neglect.

There does not appear to be any thing in the practice of the agriculture of this county so very reprehensible as the little attention that is paid to the destruction of weeds. There seems to be a degree of *liberality* interwoven along with the other desirable qualities of the good inhabitants of this county; for they consider that there is *enough* of food for the grain, and *enough* for the weeds: their benevolence would be, however, still more laudable, if in place of the weeds, they would direct their attention a little more to the practice of *hoeing* and *weeding*, by which women and children might subsist comfortably upon that part of the earth's production,

which has long been appropriated to the nourishment of weeds.

Weeds are the ancient natives of the soil; they are *nature's children*, and by no means *useless*; for she made nothing in vain. Yet, in respect to the farmer's purpose, they are not only *useless*, but highly *hurtful*, because they avail themselves of his industry in manuring and cultivating the soil, and appropriate to their own use that nourishment, which he had intended for more profitable crops. The farmer ought, therefore, to consider them as not only intruders, but enemies; and their destruction and extirpation should claim his most serious and unremitting attention.

Although all weeds are in some degree pernicious, yet some are more easily subdued than others.

The most difficult to conquer, are such as grow readily from seed; and those which have roots, *every part* of which is endued by nature with such vigour as to become a strong plant in a short time: of this kind is the *couch grass*, meliot, colt's foot, fern, and others of the same hardy tribe.

Some affect the grain only so far as they rob it of a part of its food; but others add to this, that of infecting, by their noxious smell, the corn that had, in spite of their depredations, struggled for a scanty subsistence: of this race are the meliot, garlic, &c.

Manures.—Abstracting from the vicinity of large towns, the principal manure is lime, and the production of the land, to which the bottom of ponds, and scrapings of lanes, are added by good farmers: the makings of *mixens*, however, is not properly attended to in general.

The price of lime at the kilns varies according to the distance from coal, from seven to fourteen shillings a load, of *fifty-four* Winchester bushels, with three or four gallons of drink for the quarry men. The quantity laid on an acre is from one load to one and a half; but near the kilns,

where

where the frequent application of that *stimulus* has exhausted the land, a greater quantity is used

The benefit of lime is found to be greater on sandy than on clayey lands. The inclination of clay to retain water, which checks the operation of the lime, by divesting it of the power of attracting from the atmosphere the nutriment of plants, *may* account for this. If the land be foul, the lime is watered immediately when it is brought from the kiln. Next day it is spread on the land, and harrowed into the ground *as fast* as possible. The following day the wheat is sowed and ploughed down under a thin furrow. This practice is, however, not general.

Implements of Husbandry. The plough in general use is the long heavy one of the district. It contributes to the ease of the ploughman and the burthen of the cattle, by its great length. Some of the best farmers have now introduced the Shropshire light plough; some with, and others without a wheel. It will however require some time to abolish the use of an implement that has been consecrated by time. The harrows are too light. The teeth should be pointed a little more *forward*; by their *too perpendicular* direction, they are apt to *skim over*, in place of *tearing* up the roots of the weeds. The Herefordshire waggon is a very complete instrument; but were the wheels *broader*, it would contribute to the safety of the roads.

Seed Time. The wheat is generally sown from the beginning to the middle of October. Men of much experience differ as to the time at which this operation ought to be performed. Some say that the wheat should be early sown, that the shoots may acquire strength before the frost sets in; others, however, maintain, that the longer the land is kept under the plough, the more effectual will the weeds be destroyed. If the land be in good heart, and the season dry, such men

prefer the middle of November. Beans, pease, and oats, are sown from the middle of February to that of March. Barley about the end of April and beginning of May.

Harvest begins the first week in August, and ends the first in September, in general.

The hay of this district is uncommonly well adapted to the feeding of cattle: the farm horses seldom eat a handful of oats, yet they are in good condition all the year. Whether this be owing to the natural goodness of the soil, or superior management in the mode of making and time of cutting, is probably not quite ascertained.

The winter feeding of cattle is here well conducted. Round the sides of the yards (folds) a row of *cribs* is made, by sticking stakes firmly into the ground; watlings or withies are then wrought along these in a basket-like manner. In these cribs the cattle are fed; the young horses and brood mares in "hecks" under a shade.

The feeding stalls of the district are uncommonly well constructed. The breadth of the covered building is from fifteen to sixteen feet. The length will depend on the number of stalls required: each ox has a stall to himself, seven or eight feet wide, and of the *length* of the whole *breadth* of the covered building, fifteen or sixteen feet.* At the one end of his apartment, his meat stands in a *crib*, and at the other, beyond the alley, his drink stands in a *freestone* semiglobe *trough*; and according as the craving of his appetite requires, he helps himself to either, at pleasure. If he leaves any fragments of his meat that he does not like, it is taken out of the crib,

* Together with an alley in front, *uncovered*, seven or eight feet in breadth.

and thrown over a wall that separates his stall from the fold into another crib, where the young cattle in the yard eat it greedily, and then he has a fresh supply of provision.

Both ends and *one side* of the building are close; the other side, generally to the east, is *always* open, the roof being supported by pillars of wood or stone. When a stream cannot be turned into the troughs, a pump is sunk, from whence water is poured into the first trough, which has a communication with all the rest.

The stalls are separated at the lower end, next the water, from each other by a *gate*, which is so hung, that when moved on its hinges, it shuts the next ox within half of his usual range, and leaves an open alley for bringing any particular ox out to be examined or exercised, without dirtying his feet in the fold.

The food used in feeding cattle, after they are taken into the stall is, *turnips*, *hay*, *corn*, and "*cakes*" made from the refuse of *linseed*. The corn is barley or beans, ground and given dry. The high price of the "cake" has induced some people lately to use *linseed*, boiled into a *jelly*, and mixed with flour, bran, or chaff.

Fences here consist of *white-thorn* hedges, planted from the nursery of three years growth, and protected by a dead fence and ditch until they be out of danger, which they are, in good land, in the course of three or four years. Good farmers lay out their plans, so as to have the piece *behind* the ditch and hedge in *tillage*, until the quicks are able to protect themselves. But in the usual rotation of crops, turnips must come there before that happens. When, therefore, the stock is turned into the turnips, *hurdles* are put behind the quicks, which may be removed when the crop is eat. The size of fields varies from *five* to fifty acres.

Some

Some superior managers, on their *own land*, use a mode of fencing which tenants cannot be supposed to adopt, on account of the great expence. The quicks are planted in the ground, with a small, but sometimes *no* ditch, and then protected by *posts*, *rails*, and *pails*, which, including the value of the timbers, cost from ten-pence to eleven-pence a yard, the *single*; but one shilling and six-pence, if the rails be on *both sides*, without a ditch.

The waste lands, in this county, may be estimated at *twenty thousand acres*. One-half of the waste land is situate in those quarters that join the counties of Brecon or Radnor, and the other half dispersed in several small parcels over the remainder of the county. Excepting some part of the former division, every acre might be converted into meadow, arable, pasture, or *woodlands*: the last probably the most beneficial of all, on account of the great increase in the demand for "*hop-poles*." At a moderate computation, the land, when so employed, would be worth from twelve to fifteen shillings annually per acre.

To deprive the *poor* of that benefit, which, in their present state, they derive from the *waste land*, must, no doubt, at first view sound *harsh*. But it ought to be remembered, that in this wealthy county, where there is so much work to be done, and so few hands, comparatively, to perform it, there are few *poor* that do not deserve to be so. Those persons who are disqualified to provide for the calls of human nature, by the feebleness of *infancy*, the crushing hand of *disease*, or the infirmities of *old age*, cannot be said to be poor, because ALL the *landed property*, situate *within* their respective parishes, is always liable to be charged with their maintenance, whatever changes may take place in respect to its owners, or occupiers.—Extravagance, folly, or profligacy, may induce the owners of these lands to dispossess themselves of their right in them, but the right of the poor

remains *unalienable*, while our present just, humane, and wise laws have an existence. Ample provision for the want of every person that falls under *either* of these descriptions, is chearfully submitted to by the inhabitants of districts less distinguished for benevolence than those of that under review — Whatever be the *means*, however, that put it in the power of any *other* class of the people to live in idleness, except these must even prove hurtful to the public and to *themselves*. The *industrious* are not only oppressed by supporting the idle and the profligate, but the public in general are injured, by leaving in the *uncultivated soil* that portion of the food of society, which their being compelled to labour, would add to the general mass.

The most extensive districts of *waste lands*, in this county, are situate at the foot of the Black Mountains, above the Golden Valley. I do appeal to such gentlemen as have often served on *grand juries* in this county, whether they have not had more FELONS brought before them from *that* than any *other* quarter of the county. Yet the people there are not *naturally* more vicious than their neighbours. IDLENESS, that *fell* ROOT on which VICE always finds it easy to graft her most favourite plants, and which is found to contribute so much to their future health and prosperity, alone form the characteristic difference.

A *cottage*, with a few acres of inclosed land, gives the occupier a right to turn stock to these common hills. The profit of that stock is expected to supersede the necessity of labour, in cultivating the few acres which he possesses: should these *hopes*, however, not be *realized*, any method of providing for the *demands of the day* is preferred to the drudgery of labour. It is scarce necessary to add, that these remarks allude only to *some* occupiers of very small holdings in the *immediate* vicinity of these mountains, and that that quarter of the county abounds in farmers of industry, probity, and worth.

The farmers in this county are often at a loss for labourers: the inclosure of the wastes would increase the number of hands for labour, by removing the *means* of subsisting in idleness.

LABOURERS WAGES.

Men hired by the year, from six to nine guineas.
Boys from - - two to three ditto.
Women from - - three to four ditto.
Time of hiring in May.

GRAIN IS THRESHED,

Wheat for three-pence halfpenny per bushel, of ten gallons.
Barley, pease, and beans three half-pence, ditto ditto
Also three quarts of drink per day to each man.

DAY LABOURERS,

Six shillings a week in *summer*, and a *gallon of drink* to each man.

Five shillings a week in winter, with three quarts of drink

In harvest, *fourteen pence* a day, with meat and drink.

Women, six-pence a day, with two quarts of drink all the year, except in harvest, when they have also meat.

Time of working. In harvest, as early and late as they can see; in winter from light to dark; and in summer from six to six.

The grain is cut by persons who come from the mountainous parts of Wales annually for that purpose, mostly from Cardiganshire. A *foreman* generally agrees for a whole farm at a stated price per acre, who finds the requisite number of hands to fulfill his contract, at whatever price he can.

Planting hedges, and making the ditch, from six-pence to

ten-pence a perch, (of seven yards) depending on the depth of the ditch.

Plaching—(that is laying old hedges) from four-pence to six-pence a perch. This is done very neat. The plants are cut almost wholly through, in order to encourage the young shoots to spring round the old stump.

Draining is much attended to by all good farmers, and is found to be of more benefit than any other mode of improvement that has lately been introduced on the clayey soil of the district. They were formerly made of *wood*; but that mode is now justly abolished. It looked well in *theory*, but was found to fail in *practice*. Drains are now wholly made of *stone*; and if carefully executed on the present plan, will not only produce the intended effect, but will also last for ages. The breadth, at the top, is about eight or ten inches, and from six to eight at the bottom. The depth from two and a half to three feet, but more if any little swell rises above the general surface of the ground. The stones are broken small, and then thrown into the drain until they be within six inches of the surface. The farmer, or some trusty deputy, ought to see this part of the operation performed, and take care that the stones be not too large; and that they are covered on the top with straw, fern, rushes, or some such vegetable, in order to prevent the mould from falling down among the stones, which would soon form a solid mass, stop the passage of the water, and thereby render the labour in a great measure useless.

When the wetness is occasioned by a number of little springs oozing from the bottom of the hillock, the drains should be made across the field, and a foot or two higher than the water bursts to the surface, and with a gentle sloping directed to the next ditch.

When the field has but a gentle fall, cutting the ditch on

the upper side three or four feet deep, has often superseded the necessity of any under-drains, by catching the springs before the water come to the surface; but this is not always the case.

Some drains are made here by placing a flag-stone sideways on the bottom, covering a vacant triangular space for the passage of the water. One side of this triangle is formed by the bottom of the drain, the other by the side, and the third by the flag-stone. This, however, is not found to be so certain as the other. The side of the drain may fall down into this vacant space, and by that means stop the water, which, by its natural subtility, would find its way through the loose stones thrown in promiscuously. The price of making these drains is six-pence for a perch of seven yards, with a gallon of drink per day for each man, the farmer finding rough stones, straw, &c.

Woodlands. This county is in general well wooded, and the coppice wood is kept under a most regular and rational system. The softer woods, such as ash, sallies, alder, are regularly cut from twelve to fourteen years growth; the oak from eighteen to twenty years. One standard is left to each forty-nine square yards, here called a lugg; or two standards, on three luggs, as they can be best found. These standards, when they can be had, are *maiden-trees*, and not old *stumps*, which are left clear of all incumbrance, in order to enable them to produce the greater quantity of young shoots. The price of coppice wood is from two and six-pence to four and six-pence the lugg; the proportion of the lugg to the statute perch being as seven is to five and a half; * the statute

* The customary perch here is seven yards. In measuring woodlands, this was used in place of the statute perch of five and a half yards. Hence the difference between the wood and the statute acre.

tute acre will contain ninety-eight luggs and three-fourths nearly. The coppice wood will therefore sell for a price of above from twelve to twenty-two pounds per acre, of from twelve to fourteen years growth, a return which the best land in the county, abstracting from the vicinity of large towns, would not yield to the owner.

The cultivation of HOPS has lately contributed to raise the value of woodlands in this county, in a very remarkable degree, which produces not only a sufficiency for its own consumption, but a vast quantity is annually sent to the Severn for the Bristol and other markets, mostly used in making hoops and hop-poles. The hills, which in most other places, make but a trifling return to the owner, here, when planted, yield him more than his richest lands. The men who are expert, and apply to their work, can earn from twelve to eighteen shillings a week, in the cutting, barking, and stripping these woods during the season: pailing and hurdle-makers more, throughout the year. This money centers at last in the farmer's pockets; from whence most part of it moves into that of the landlord's. So invariably do manufactures and agriculture contribute to the mutual strength and support of each other; hence the whole machine is kept in perpetual motion, whilst, in this county, it derives its whole vigour from no other resources than the mere production of its own native soil. Health, peace, and plenty, smile in the countenance of its very peasantry: whilst the whole of its wool is annually sent to less favoured districts, where the manufacturing it into cloth, furnish employments to their inhabitants, who thereby partake of a portion of that superabundance of comfort with which nature has blessed this favourite district.

Orchards—which are so generally dispersed over all parts of this county, must some day become an object of considerable importance to its agriculture, and will be found entitled

a considerable share of attention from the promoters of every scheme calculated for the internal improvement of this kingdom. For they hold forth the means of procuring to society a beverage not only healthful, but grateful to the palates of all ranks and conditio as of men, with little labour, and less expence.

Orchards are planted in this county, in various degrees of elevation, and in aspects that look to every point of the compass: high and low, south and north, east and west, however, have all found their respective advocates; and the man who would venture to give either of these a preference over the rest, would not only bring a legion of foes about his ears, but would find his hypothesis opposed by a phalanx of facts, and a host of reasonings, which he would find it difficult to overcome.

The friends to the low ground will argue thus: It will not be denied, that the low lands are richer than the sides of hills, because the finest particles of the soil have been, in the course of ages, washed down by repeated floods. The trees there are found to be of a superior size to those on high grounds; and what contributes to the growth of the tree, must equally contribute to the health of the fruit. Besides the advantage of a richer pasture, the orchards, on flats, escape these storms in a great measure, to which those on the hills are exposed. The *blight* comes in clouds, and clouds often lean on the hills when they pass over the vallies.

The advocates for elevated situations argue after a different manner. It is not travelling clouds, say they, that bring the blight. The mischief is done in calm heavy weather, when the atmosphere presses downwards, without any horizontal motion. The air being more dense in the vallies than on the hills, contains a greater number of the insects that keep near the surface of the earth, and are unable to climb high in the atmosphere. This subjects the trees in

the vallies to their depredations, when those on the hills escape. The vallies are often inveloped in a cloud of misty vapour, prejudicial to the growth of the infant fruit, for several hours in the morning; while those placed in a more elevated situation breathe a more pure air. It is found, that if the frost sets in when the trees are dry, it does no harm; but if they be wet, the consequence is then fatal. Now, say they, the trees in the vallies are wet for many hours in the morning, when those on the heights are dry; consequently the danger of being caught by the frost in that situation is much greater.

Those who thus differ in their opinion respecting the degree of elevation which an orchard ought to occupy, are not more strenuous in support of their respective hypotheses than they who contend for different aspects.

Those who prefer the south-east side of the hill, observe that the morning sun directs his animating rays to that quarter before any other; that the trees being sooner relieved from the cold chill of night, enjoy a longer day than those placed in any other situation. The hills forming an angle of twenty or thirty degrees of elevation, throw the sun's ray back upon the fruit, in the nature of a garden wall: this brings the fruit quicker forward, and thereby affords it a better chance, by being sooner out of the power of the blight to injure it, than fruit in another aspect, which, by its slower growth, requires more time to pass the period of its nonage; and is, of course, longer within the reach of danger.

These arguments certainly appear very plausible, but there are others of a direct contrary tendency, that will merit attention. The northern aspect does not want supporters, who argue thus:

The busines of a *ciderist*, say they, is not to bring his fruit quick forward, but to keep it back, if possible, until its well-known enemies, the frost and the blight, be past. Were

Were it not for April frost, and May blights, we should have a crop of fruit every year as regularly as we have a crop of corn. By planting trees in a northern aspect, the fruit will be kept back three weeks later than those in a south-east aspect. By this means there is an indisputable better chance of escaping the frost, and a much greater probability of avoiding the blight. There is at least a moral certainty of avoiding that blight which ruins a southern aspect, because the critical period at which the fruit is subject to the mortality of the blight lasts only a few days. *

 These

* If a mat, or piece of white paper, be thrown over a tree at night, and examined in the morning, if there has been a blight, there will be little black spots, like the point of a pin, visible when viewed. They seem lifeless; but if the sun shine, by twelve o'clock they will be in motion. By next morning, they will be gone from the mat, and then, but not till then, they go into the leaves of the trees, where they form nests, and do the mischief. It happens very unfortunately, that these insects are more fond of apple-trees than any other food. In two or three days after the blight has infected an orchard, the leaves of the trees will be curled. If with a powerful microscope the inside be examined, there will be a thousand small insects seen: these will seize upon the half-formed *embryo*, and destroy it in the midst of its feeding leaves.

When wounded by the insects, the leaf curls from an impulse similar to that by which a man is prompted to put his hand to his face when a fly stings him there. When the host of little vermin begin to wound and devour its inside, the point of the leaf bends with sympathy to the wounded part; but cannot relieve it. In a few days the little insects acquire so much strength as to be able to fly off, and then the leaf rears itself. If the blow fall not on the tree, nor the fruit formed, when these vermin arrive, they do no mischief; for they lurk into holes, and the blow leaf escapes them, at least it is not more infected with them than any other leaf; but if the young apple be just formed, and not of sufficient strength to repel their attack, it is of much the food they want, that it falls an immediate sacrifice to their depredations.

These are a few of the points in which men of large practice and much experience differ in respect to the situation of an orchard. There is another circumstance in which one would expect them to agree, that is, the distance at which trees ought to be planted, in order to insure a crop of apples, without paying any regard to the injury which they might do to the herbage; but here also a great variety of opinion prevails. In the arable fields the trees are sometimes twenty-five yards separate from each other; in close orchards, sometimes not above eight yards. The medium of the fields may be stated at twenty-two yards; that of orchards at eleven yards. Hence an acre of field ground will contain ten apple-trees only; an acre of orchard ground forty. Theory would not hesitate long about the decision of the point: the ten trees on an acre having four times the extent of pasture for root and top, that the *forty* trees on an acre have, would readily be pronounced the most healthy and vigorous trees, and of course the most likely to bear fruit. This doctrine, it is true, has its friends, who bring both facts and arguments in support of it: but there are others who oppose it most strenuously, and maintain that close planted orchards are by far the most certain, and the most productive. In support of this hypothesis they maintain, that the *old fruits* were all planted in close orchards; and that when trees are close planted, they shelter and protect each other.

This striking variation, in the opinion of men of experience and observation, who may be supposed to have studied the subject, and to be well acquainted with it in all its parts, exhibit, in a most striking point of view, the danger of indulging theoretical speculation; or, in our humble attempts to trace out the means by which nature accomplishes her ends, to lay the smallest dependence on any thing except absolute and well-established facts. From the unpleasant sensations inseparable from a state of doubt and suspence, the mind

mind feels itself, however, considerably relieved by the comfortable recollection, that this variation of opinion incontestably proves that fruit trees will bear in *all situations* and aspects within the district under review. All aspects have their *foes*, as well as their *friends*, who are obliged to acknowledge that trees *there* do bear, only not so well as in the favourite aspect to which their respective advocates give the preference.

It is agreed upon all hands, however, that the spring frosts, and May blights, do mischief to the fruit, and are perhaps the only cause why there is not a crop of apples and pears every year as regularly as there is a crop of corn. The blight spreads terrors much more tremendous, than those exacted by the *frost*, which, if it does not come on suddenly while the blow on the trees is moist, does no harm. It seems pretty generally agreed also, that the critical period of time at which the fruit is accessible to the devastation of the blight is but of short duration. If one might venture to hazard any thing in the shape of an opinion upon so intricate a subject, it would be, a recommendation to watch with much attention the operation of nature in this business: for a single fact from her volume, properly authenticated, is preferable to all that we can learn from the united wisdom of philosophical speculation. It is well known, that nature has endued some apple trees, such as the redstreak, foxwhelp, early marlet, junettin, &c. with the power of maturing their fruits earlier in the season than others, as the hagly crab, golden-pippin, golden rozet, brefling, &c. It would seem, at least, probable, that there could not be any danger in our taking a hint from the operations of nature in this instance, so far as to lend her all the assistance we can, in her apparent endeavours to obtain those ends which she seems to have in view. We know that a south-easterly aspect, and a light sandy soil (moderately so) will assist the early fruits to get faster forward (perhaps out of danger's

danger's way) than they could do in any other soil or aspect. We know equally well, that planting trees on a flat, or a northerly aspect; and on a stong clayey soil, will keep the fruit back, perhaps till the enemy has passed, and longer than if they had been planted in any other soil or aspect.

If this conjecture has any foundation in nature, then all early fruit trees should be planted in a southern, and all late trees in a northern aspect.

When the land of a farm admits of it, there is one certain advantage attending having one orchard in a southern and another in a northern aspect, that it gives a double chance that one of them may escape the blight: because, even the same kind of trees will be some weeks more forward on the southern than the northern side of the hill.

The degree of elevation should determine, in a great measure, the distance at which trees ought to be planted from each other. If the situation be high, they ought to be planted thick, about eleven or twelve yards distant; because they shelter and protect each other by being thus close. If the situation be a low flat, double that distance will in the general run be found to answer best.

Soil of Apple-Tree Orchards. The apples, like different kinds of grain, affect, some a light sandy, and others a strong stiff clay. It is a fact well ascertained, that cuttings from the same tree, grafted upon similar stocks, and planted in different soils, will produce different cider. It is also found, that the early fruits obtain their greatest perfection in a sandy soil; and that the late fruits succeed best when planted in a strong clay. Some of the most valuable apples, such as the stive, hagly crab, and golden pippin, are said to be fond of a light sandy soil. The best orchards, however, are on a strong clayey soil. It seems to be admitted, that the cider from trees in clay, is stronger in the

body, and will keep better than cider made from trees that are on a sandy soil.

Pears are not so delicate as apples, for they will thrive and produce in almost every soil. They are subject, in some degree, to the havock of the *frost* and the *blight*, but not so much as the apple; since in a southern aspect the apples have failed, whilst the pears have borne good crops. The fact seems to be, that the insects that do so much mischief under the name of blights are not so fond of the young pear as they are of the young apple. It is said, however, that if the chincey pear is early, it runs a great risque; but that if it is late in blowing, it never fails of a crop: one farmer has had two years fail only, in thirteen years. The laughland pear, if it blows, it is said, never fails of bringing a crop. Hence it would seem, that the frost must be the only enemy of this fruit; since without it blows, there cannot be any fruit formed in embryo, for the blight to destroy.

Although all pears are only artificial productions from *pirus communis*, or the common wild pear, yet there are some that, as an orchard fruit, stands in much higher estimation than others, and whose fruit brings a much higher price.

The squash is the most renowned of the whole tribe of pears. The oldfield, borland, red pear, and sack, are also in great estimation. It is rather surprising, since pears agree so well with any soil, that more are not planted; but cider, it seems, is the fashionable liquor of the district.

Manufacturing of Cider. Nature having performed her part of the process, in bringing the fruit to maturity on the boughs of the trees, consigns to man the direction of the further operation of manufacturing it into cider, for his own use; and in this, as in many other instances, he proves but a very indifferent agent for himself.

Utensils. The mill-house is generally at the end of an old building, but sometimes an open shed. The dimensions should be twenty-two by twenty-seven feet, but most are smaller. The mill consists of a stone like a mill-stone, (runner) set on its edge, with an axle through the center, and fixed to a post erected perpendicularly in the middle of the mill-house, round which the stone moves, drawn by a horse, at the distance of about five feet, in a stone trough, provincially *the chase.* The apples or pears are thrown into the chase, and the horse moving round in a circle, drawing the stone on its edge after him, over the fruit in the trough, until it is reduced into a kind of paste, provincially *must*; a boy or a girl, driving the horse round, and with a little wooden spade, gathering the must that had been squeezed to the side by the pressure of the stone under it, the next round, until the fruit be ground into a proper consistency. The must is then taken out of the chase, and worked up in a hair cloth, and put into a screw press adjoining, in different layers, until the press be full, and then it is squeezed by the assistance of a strong lever, in the press, the juice falling into a vessel placed under the press for that purpose; from thence the cider is carried in pails to the hogsheads, and there left for fermentation.

The extreme simplicity of the mill and press renders them peculiarly well adapted to be put into the rough careless hands destined to use them. But when the period arrives when the manufacturing of cider, like the distillery or brewing, shall form a profession by itself, it will then occupy the attention of scientific men, and machines very different in power at least, if not in principle, from those now in use, will be adopted. Men of large concerns are obliged to leave the making of cider to their common servants; and it may reasonably be conjectured, that their orders are not always punctually obeyed.

Many farmers consider cider-making as an intrusion upon operations of greater importance, and often wish there had not been an apple-tree in the county. While the most part of the cider is manufactured by men in this humour, * it is not to be expected, that even the smallest improvement will be adopted in the machines used. It will not, therefore, answer any real use to point out their imperfections. †

* The following conversation, which passed the other day, will shew what reception any person would meet with, who would propose an amendment in the cider mill:

"Master, what horse shall I take to drive cider mill?"

"D——n the cider and the mill too; you waste one-half of your time in making cider, and the other half in drinking it. I wish there was not one apple in the county. You all think of cider, no matter what comes of plough."

† There was a most glaring absurdity in the common press of this district, that is now perfectly removed by that judicious philosopher and ingenious mechanic, Mr. Apperley, of Withington.

The trough in which the apples were pressed, was always left rough, with a number of cavities in the stone of which it was made. By this means the kernel, which, it was admitted, gave a fine flavour to the cider, escaped whole, and was left in the must. The reason assigned for this defect was, that if smooth, the stone would slide along the trough, and not turn on the axle-tree. This is now effectually removed by making, on the inside of the chase, a row of cogs, like those on the inner wheel of a common corn-mill, with a corresponding number made on the axle-tree on which the stone moves: these, by falling regularly into each other, prevent the stone from sliding; and by making the stone and the bottom of the trough, in which it moves on its edge, quite smooth, the kernels are all bruised, and the cider enriched by their juices.

Another impediment is also removed from the cider-press by the same gentleman: the horse pulling the end of the axle-tree, pressed half his strength against the center to which it was fixed, as he did not move at right angles, but on an angle of about forty-five degrees.

Mr. Apperley has added a piece of wood of about three feet to the end of the axle-tree, projecting towards the horse. By this means, fixing the horse to this point, he draws nearly at right angles to the center of the power which he has to overcome.

The Herefordshire farmers have so much business between corn, cider, hop, and fattening cattle, on their hands, that a part must be, and always is neglected. In a fruit year, "people must begin early, otherwise they would never get through the work:" hence men are sent with "polting-luggs" to knock the apples off the trees before they are ripe. By this means the cider is reduced more than one-half in the value; or rather, what might have been sent to market to advantage, is given away as family drink.

Stocks, for grafting upon, are raised here by sowing, in November or February, the *must* or *residuum* of apples or crabs, after the cider or vinegar has been squeezed out of the fruit in the mill. Some sow the must in drills, others in the broad-cast way, on a bed of highly-cultivated mould, in the garden, which is to be kept clean from weeds by hand.

This method, however, is not only reprehensible, but a satire upon common sense; for the largest and most healthy kernels are bruised under the stone, and the smaller dwarfs that escape through the imperfections of the mill, only produce plants. To pick a few apples from the tree, whose fruit is intended to be propagated, and take the most sound and healthy kernels out of them before the fruit is bruised in the mill, would surely be attended with very little trouble; yet the thing is not done.

To rear stocks from the apple-kernel, for the propagation of cider fruit, is highly blameable, because the apple-tree is not the child of nature, but the mere creature of art;* and

* Take a cutting from the wild crab, and graft it on a black thorn stock: from the offspring take a cutting, graft it on a white thorn stock: from the tree thus produced, take a cutting, and graft it on a wild crab stock, and this tree will produce apples. By a number of repetitions of this operation, have all the varieties of apples been originally produced.

and therefore subject to a more premature dissolution, as well as diseases and infirmities from which the crab, its natural parent, is exempted.

The reason assigned for grafting on the apple-stock is, that the tree will bear fruit three or four years sooner than that on the crab-stock. But when it is considered, that the crab-stock will support the tree for twenty or thirty years longer than the apple-stock, that it, in some degree, protects it from the havock of the moss, and the still more fatal operation of the canker, and that the expence of protecting the tree, on the apple-stock, during its infancy, is greater than that on the crab, because it is much longer before it arrives at maturity, it seems to be worthy the attention of the land-owners to inquire how far it would be proper to restrict their tenantry from planting their orchard trees on apple-stocks; for when the navigable canals, now began in this county, are finished, a very considerable advance in the price of cider may reasonably be expected; since, by that means, the owner will be enabled to send it to distant districts, from whom the expence of land-carriage, at present, excludes it.

At the end of two years the seedlings are planted out in the nursery in rows, three feet distant, and two feet from each other in the rows. The plants are trimmed twice a year, while in the nursery. When they are about half an inch diameter, they are cut about a foot above the surface of the ground, and "saddle-grafted" with a shoot, of the preceding year's growth, from the tree whose fruit is intended to be propagated. These grafts should be taken from healthy middle-aged trees; for if the graft be from an old tree, it will bear fruit a year sooner, and make the best flavoured cider; but the graft from the young tree will continue to bear for a longer time, carry larger fruit, and prove the most healthy tree. Men of long experience make it a point to follow the middle course. The great quantity of moss that oppresses the trees may perhaps be in some degree occasioned

by grafts from old trees. The stakes, in place of being cut as they are, a foot or two above the ground, should be cut almost close to the surface.

When the trees begin to bear fruit they are planted in the orchard; but in general too deep in the ground. If the tree can be got to stand the violence of the wind, it cannot be planted too near the surface. For nature, in performing the operation, places the seed of all plants on the surface. Those who would submit to the trouble would find their advantage in planting the tree from four to six inches *only* below the surface, and bring fresh mould to raise a heap round the plant, two feet high, which, when the roots had acquired strength, might be spread on the land for manure.

The general method of protecting young trees, is to plant them in hop grounds; and by the time they are out of the reach of danger, the land is turned into arable or pasture, and other land is dressed for hops.

When planted in pasture land, stakes and thorn bushes are placed round the young trees, to protect them from the cattle. *

When the trees are unkindly "hide-bound," they are "scored," by cutting the bark with the point of a knife, from the bottom to the top of the stem.

All the diseases to which apple-trees, in this district, are liable, are occasioned by the badness of the soil, the stock, or the hereditary infirmities of the tree from which the graft had been taken, and their being planted too deep in the soil. These are calamities which no ingenuity can remove after the tree has arrived at maturity; and, therefore, ought to be carefully guarded against at the proper time.

The

* I met one gentleman who annually paints his young trees with human ordure, which has afforded them the wished-for protection; for no animal will touch them.

The Moss is sometimes cured by draining the land; sometimes by digging round the tree in winter, and bringing fresh mould from the bottom of ponds, roads, or old walls, previously prepared by pulverization, andp lacing it round the roots of the tree, before the earth be thrown back.

The Pruning of the Trees is too little attended to here. The redundancy of wood is very prejudicial; the tops being so close that scarce a bird can find its way through the boughs. Were one third of the branches cut off, the tree would acquire additional vigour, and be enabled to bear more regular crops.

The Miseltoe, a plant of the parasite kind, commits great haveck upon the apple-trees of this district. It may be termed a vegetable drone, since it does not spread its roots in the ground to search for its food, but subsists upon the industry of other plants.

In travelling along this county, when the trees are stripped of their leaves in winter, an object of peculiar reproach to the inhabitants presents itself. Scarce an apple-tree is to be seen that is not pining under diseases, and bending under infirmities, before the period of its natural dissolution, in consequence of devastation committed upon it by this obnoxious vegetable vermin.

The destruction which the miseltoe does to the trees, is so universally admitted, and the removal of it, by cutting off the branch on which it grows, is so easy, that I did imagine that some fragments of the Druidical superstition still remain in this district, and that the people were thereby deterred from destroying this pest to the orchards. For, since a labourer could clean fifty or sixty of the trees in one day, I could scarcely believe, that, to save a shilling, any man of common sense could see his trees lingering under disease, and suffer an annual loss of some hogsheads of cider. Upon repeated

repeated inquiries, however, I found that no other cause than laziness was assigned for the destruction of the orchard. "Cannot do every thing at once," was all the answer I could get to my repeated remonstrances on this subject. At the side of the River Wye, I found one small orchard quite clean from miseltoe. Imagining that there was something in the soil or aspect that might be the cause of this, I waited on the occupier, and asked how his orchard came to be so clean, whilst all his neighbours' were covered with miseltoe? He said, "We have a small orchard and a large family, so must make the most of it. I pulled off all the miseltoe some years back, and we never had any more of it; and you cannot believe how well our trees have been since."

"Cannot you prevail upon your neighbours to do the same?"

"It is in vain talking, Sir; they have large plantations, so have plenty of apples, and plenty of misletoe also." *

Some small forfeiture, to be applied towards the reparation of the parochial road, inflicted on the owners of apple-trees, who suffer them to nourish miseltoe, might in this district be attended with beneficial consequences.

Hops—form a very considerable article in the rural economy of the county of Hereford, and seems to be of all

* Pliny relates, that the birds eat the berries; and that passing through their bodies they drop them in their dung on the boughs of the trees; and that this operation is requisite before the miseltoe can propagate its species. This fable of Pliny has been laid hold of as a pretext for indolence: for what is the use of pulling off the miseltoe, since the birds will bring more there next year? Du Hamel, however, has clearly proved, that the miseltoe, like other plants, is raised immediately from the seed as it falls from the plant; since he made several experiments, by putting the berries below the bark of different trees, all of which grew, except that on the fig-tree, which refused to nourish it.

all others the farmer's peculiar favourite. Time was, however, when the case was otherwise. Upon the first introduction of hop into this latitude, it met with a most unwelcome reception; for a petition was presented against it to parliament, in the year 1528, in which it is stigmatised as a most pernicious and wicked weed; and the national vengeance was requested to be hurled at the heads of those who should propagate it on their lands. The wicked weed, however, did not remain long in disgrace; for in 1552 it is mentioned with some respect, and in 1603 was finally taken under the protection of the legislature. A penalty is inflicted on those who shall be found to adulterate hops, with a view to add to the weight; so rapidly had the wicked weed ingratiated itself into the good graces of our ancestors.

It is generally, I believe, admitted, that the best aspect for a hop-yard is a south-east one. Men of long experience wish to have a border of some plantation or other to the west; and when that cannot be had, they suffer the hedges in that point to grow as thick and high as they can get them. The time of picking hops is, in general, about the autumnal equinox; and the wind being then, mostly, from that quarter, shelter is found to be of advantage. Others of equal experience and knowledge, however, have hop plantations on flat land; and towards other points of the compass, on side lands. It is admitted, in general, that in a good year the aspect is of no importance; but that in a bad year, some situations are found to bear a crop, while others have failed.

If it be a wet summer, it is found that hops do not grow so well upon a clay, as upon a sandy soil. The reverse is also said to hold true, of the sandy soil.

Rearing Hops. The land preferred by the planter, in this district, to be converted into hop ground, is meadow or old pasture,

pasture, when it can be had; but any land that has lain for years in grass he prefers to tillage. The land is ploughed from the middle of November to Christmas, by skimming over the ground with a thin furrow, in order to bury the sward. The plough goes immediately along the former furrow, and raises a second deep furrow, which is thrown on the top of the first, raising thereby *a pale* of the depth of six or eight inches.

The sward thus buried, and out of the reach of the air, begins to rot, and causes a degree of fermentation in the subsoil; and the top mould, by being exposed to the influence of the atmosphere for the space of two months, becomes, in some degree, pulverized, and after cross harrowing, is then prepared for the reception of the young *sets*.

The sets consist of cuttings, taken from the old stocks, of the length of four inches. To each set it is requisite to have two or three joints. From one of these joints there is a moral certainty of having shoots. Three or four sets are planted on each hill.

There are two modes of planting. The one by digging a square hole six inches wide, and as deep as the plough went. This hole is afterwards filled up with some of the finest mould by a spade; and then pressed together, by two or three strokes with a round rammer, nearly of the size of the hole, as close as possible.

In the mould thus pressed, holes are made with a wooden pin, of the same depth, and a little wider than the sets, in which they are planted. The tops of the sets are then covered with a little fine mould, rubbed between the hands, in order to prevent any hard clods from hindering the vegetation of the young shoots.

The other method of planting is less expensive, and is said to be attended with equal success. This consists in making an impression with the rammer, after the land is harrowed in the spot where the hills are to be made, and then planting the sets within the circumference of this impression, without

digging any holes. Some of the most intelligent planters use this last method, although many prefer the former. If theory might presume to intrude her suggestions, it would seem that lands of different degrees of stiffness require different management.

The distance of the holes should be varied according to the richness of the land, since the richer land will produce a greater quantity of bine than the poorer; a greater distance must be left for the free circulation of the air, the want of which would be apt to render the crops "foul." The distance between the center of the holes on good land should be six feet each way; that on the poorer land from five feet to five feet six inches.

When the hops are thus planted, the land must be kept perfectly clean from weeds by the hand-hoe.

The manner of planting, when the plough is to be used, is different, and the holes are made at a greater distance from each other. On good land, the distance between the rows is from eight to nine feet, and three feet in the rows; that on inferior is from six to seven feet between the rows, and three feet in the rows.

They use a line, or chain, with marks at the distance at which the sets are to be planted from each other. A man takes a parcel of sticks of the length of two feet and an half, he sticks one firmly in the ground opposite to each mark, not perpendicular, but forming an angle with the ground of about sixty degrees. This stick is to receive the young shoots, care being taken to direct them to it on their first appearance above the surface. Time of planting about the beginning of April.

The first hoeing should take place about the beginning of June, if the ground, by purging or throwing up weeds, should not require it to be done sooner, taking care to weed round the young stacks with the hand, in order to guard against the hoes injuring the young shoots. In a month or

six weeks, another hoeing should take place. About Michaelmas the mould should be gathered into hills round each set of stacks; taking care to leave open the eye of the shoots, by leaving a cavity of the form of a tundish on the top of each hill. In another month this cavity should be filled up with fresh mould by the spade. The space between the base of the hills should not be wider than the breadth of the spade, leaving the alleys as even and level as possible. This finishes the operation of the first year.

In order to have some benefit during this time, potatoes or turnips are, in some instances, planted in the alleys; but this is a puny piece of parsimony, reprobated by all good judges.

The business of the second, and every succeeding year, commences by throwing down the hills, about the middle of April, with the hoe, and making the land even. The shoots are then cut off level with the surface, with a crooked knife. The top of each bed of sets is then covered with a small quantity of fine mould, raised in a pyramidical form, in order to point out where the stacks are, in case they should not all spring up at the time of pulling, which is sometimes the case.

When the shoots make their appearance above the ground, the poles are put up in holes made to receive them, with an iron bar. When the bines are twelve inches high, they are tied to the poles with rushes, but not too tight, the consequence of which would be a stoppage in the circulation of the sap. This business is generally performed by women. The same operation is repeated until the wires are above the reach of a person standing on the ground. But sometimes the wind blows the top of the bine out of its perpendicular direction, and turns the point downwards; in that case a ladder with a stand is used for another tying.

In six weeks after, the ground is to be hoed again; and about

about the beginning of July the hills are made. A hollow is made on the top of each hill, which is to be filled up occasionally with fresh mould; this will strengthen and invigorate the plant, until the commencement of the picking season.*

Poles of ten or twelve feet long, are used the second year; afterwards longer ones are requisite.

The Farnham-white, the Kentish-grape, and Red-vine, require poles of twenty-one or twenty-two feet; but for most others, from fifteen to eighteen feet is the common length.

The price of hop-poles, from ten to fifteen shillings a hundred, in the wood. If stript of the bark, they will last seven or eight years; if that operation is neglected, the softer wood will be useless in three years: yet, wonderful as it must appear, this trifling trouble is sometimes dispenced with. The subsequent operation, probable produce, and profit, I pass over, as forming no part of the plan of the Honourable Board, which is to discover the most likely means of enabling the soil to bring forth the greatest possible increase, and not to pry into the amount of the well earned wages of honest industry.

Roads. The situation of the high-ways reflect no inconsiderable portion of disgrace upon the notice of this district. To say that the roads are bad is, in fact, saying nothing. They are bad over most of the kingdom, and must ever continue so while the present laws respecting them are suffered to continue in force; but here they are so in a very uncom-

* The soil of a hop-yard should be clayey, for they are not found to succeed on a sandy soil. Too much moisture subjects the plants to the *mould.* The muck should be fully rotted, and mixed with earth and lime a year before it is used. They should have a little of this manure every year, not much at a time.

mon degree; and what is peculiarly mortifying, they are, in their present local situation, incapable of being made good, although they may be mended.

The bye-roads are mostly sunk many feet below the surface of the adjoining lands, by the floods having carried away the soil in the course of ages. In such a situation no road can be made good, nor could it be kept so if it were made, because it is always liable to be destroyed by the floods. This, however, is a misfortune, which the present generation could not avoid, and which they must put up with until their descendants shall become more sensible than they seem to be of the advantage of level roads. When that period shall arrive, no expence will, perhaps, be considered too great to remove an evil which nothing but habit could render sufferable.

The turnpike roads, however, stand in a different predicament from the parochial. These have all been made during the present century; and the direction in which many of them are laid out exhibits marks of folly and stupidity uncommonly striking; or, more properly speaking, there seems to have been a malignant degree of ingenuity displayed by the persons (whoever they were) that laid out the roads, in entailing upon posterity so provoking an evil as that of unnecessary hilly roads. This county, as laid out by nature, is uncommonly favourable to level roads. The hills and swells are mostly detached, and all roads might easily have a sweep round their base. The thorough-fair from Wales to London, by the side of the Wye, as well as the communication between its own respective market towns, might have been so laid out, that, besides being shorter than the present turnpikes in general, there would not have been above a fall of one foot in twenty. There is scarce any part of this kingdom in which the roads might not have been laid out so as to supersede the necessity of using that badge of barbarity, a chain to tie a waggon wheel. But in this

beautiful champaign country, to see it dangling at the side of any wheel carriage, exhibits an object of peculiar reproach, and must be considered by succeeding generations in the same light that we do the remains of the ancient aqueducts at Rome.

There is an error of a most fatal tendency in the present laws of this kingdom respecting turnpike roads; the laying out of which is entrusted to the owners of the lands through which they pass, who are generally the Commissioners: hence they are made judges in their own cause. When, therefore, their own interest, real or imaginary, and the ridiculous prejudices of their tenants, whispered in their ears, are opposed to the interest of the public, it would betray an ignorance of the frailty of human nature, to conclude that the balance of the scale would not bear to the usual quarter.

It frequently happens, that the horrible demon of discord, that destroys the peace of almost every neighbourhood at contested elections, sallies forth upon these occasions. If the great man, who generally takes the lead in laying out the turnpike road, has no immediate interest himself, he has often a friend to oblige, or an enemy to mortify, by sending the road up hill, to save the land of the one, or through the middle of a meadow, to hurt the other. A tippling-house on the top of a hill, or a favourite piece of land at the bottom, compels the husbandman, at this day, in many parts of this kingdom, to keep one-third more cattle in his team, than there would otherwise have been occasion for.

In the course of pretty long experience, I have, very rarely, seen a great man take it into his head to ruin a turnpike road, who did not succeed, in the face not only of reason, but of facts reducible to mathematical demonstration. Pride, more than interest, often influences the conduct on such occasions. A majority of votes, at a turnpike meeting, keeps up the spirit of the party, and serves to intimidate

the enemy. The same party spirit is sometimes visible, in passing the road, by the Commissioners after it has been made. If the contractor be of the strong party, three or four inches of gravel will do in place of twelve, to which his contract bound him; but if he gave his vote with the weak party, " woe be to him !"

The notoriety of these facts is unquestionable, and the evil resulting from them is now found to be so insufferable, that in many parts of the kingdom they are making the roads a second time, for many miles in a stretch, and thereby loading the public with the annual payment of the interest of double the sum that was really requisite, had the roads been laid out properly at first. Whoever will take the trouble of adding up the different sums paid by the public annually, at the different turnpike gates in this island, will be struck with the immensity of the sum total. Every misapplication of the money expended in making the turnpike roads, through ignorance, or worse motives, becomes an injury to that public who are bound to pay the interest of it; yet it some how most unaccountably happens, that the government or legislature of these kingdoms have hitherto taken no more notice of the misapplication of this portion of the public property, than if they had not been interested in the public prosperity. *

These

* This evil might be removed by an act of legislation, empowering government to appoint surveyors, with salaries moderately competent to make it worth the attention of men of character. Twenty might be sufficient over the whole island. That no bill, for a new turnpike, should be received by the House of Commons until the surveyor of the district transmitted an affidavit to the House, that he had marked the intended road on the ground; and that it was, in his opinion, the shortest and the levellest that could be laid out between the two ends of the district through which the road passed. Should it be made to appear by mea-

These remarks allude to the kingdom at large, and not to the district under review in any exclusive degree.

I cannot see any probability of making the parochial roads in this county even tolerably safe, until the statute labour be entirely abolished; as well as the ridiculous farce of appointing one of the parishioners annually (at no salary) to inforce from his relations, friends, and neighbours, a strict performance of a duty which probably he never discharged himself; and from which, by shewing lenity to his neighbours, he will expect to be excused in his turn, when they shall respectively succeed him in the office of surveyor. But admitting the surveyor to be influenced by the most earnest desire of discharging his duty, by the time that he knows a little of his business, and the best method of minding the road, his year is out, and he is dismissed from his office, which, by the present laws, is destined to be eternally in the occupation of one novist after another. The days set aside for the performance of the statute labour are, by long established custom, considered as alloted to play and merriment; and the man who can continue to do the least work with his master's cattle, thinks he does him a kindness.

There is one great obstacle to the making of strenuous exertions to put the roads in repair, which is, that the landholder on which it falls, has often but a temporary interest in the parish. If his lease be within two or three years of expiring, and he expects another person to bid for his lands "over his head," and the roads in the parish are under indictment, he will calculate whether it would not be easier for

surement, and taking the elevations, that a shorter or a levelller road might have been made, the surveyor should be dismissed from his office, as incapable; and if it could be found that partiality had influenced his conduct, the usual punishment in cases of perjury should be inflicted.

for him to pay his share of the expence of the indictment, annually, and leave it as a legacy for his successor in the farm, than to go to the expence of putting the road in such a state of repair as would enable him to have it removed. Excepting some parts of the turnpike, almost every road in this county is liable to be indicted. The money annually paid by the land-holders, in consequence of indictments, I am informed would go a great way towards paying the interest of a sum sufficient to put all the roads in the county in good repair.

Under all these disagreeable circumstances, nothing seems so likely to relieve the inhabitants of this county from the insufferable evil of the present uncommon bad roads, as an act of the legislature to empower the landholders in the different parishes (under certain restrictions) to borrow a sum sufficient to put their roads in repair, and make the lands, in proportion to their real annual value, chargeable with the payment of the interest, in lieu of the statute labour.

I have communicated this idea to some of the most intelligent farmers in this county, and it has met with the approbation of all with whom I have conversed on the subject: and it can scarcely be suspected, that the landowners would lose sight of their own interest, so far as to give it any opposition; good roads being a requisite prelude to the admission of many great and important improvements, of which this county is still capable.

When the roads are once made, they might be rented, to keep and leave them in repair at the end of a term of years, to the lowest bidder; and they would, in general, be taken by the occupiers of the adjoining lands, because, when the team was going or returning empty, a load of gravel might be brought to repair the road at very little additional trouble or loss of time.

A clause, in the act of parliament, to the following pur-

pose, would be attended with great advantage to the roads in this county.

For every horse, &c. drawing in a waggon, &c. the wheels of which are only two inches or under, - - - - -	£.	0	0 6
For do. in do. the wheels of which are six inches,	0	0	4
For do. in do. the wheels of which are nine inches,	0	0	2
For do. in do. the wheels of which are sixteen inches, - - - - -	0	0	1

It is often mentioned as a reason for not making amendments in turnpike acts when they are renewed, that if any alteration be made, the Clerks of the House of Commons will charge additional fees: hence the old act is renewed, with all its load of original deformities.

However pure the intention of the framers of the present laws respecting turnpikes might have been, they operate in a peculiar degree as an inducement to continue bad roads in their present state; since the inhabitants of a district, oppressed by bad roads, must pay 300l. or 400l. before they can be at liberty to borrow money to mend them. *

Farm Buildings. These are, in general, constructed in a manner that does no great credit to the rural architecture of the county. It is, however, much the same in most of the woody districts of the kingdom. The foundation is, for a foot or two above the surface, stone wall with a clay

* A power vested in the judges to regulate all matters respecting the high-ways, within their respective districts, on the circuits, without the necessity

or mud cement. The house, formed of timber frame-work, is then erected upon this wall. The vacancies in the frame-work are then filled up by laths, interwoven in a basket-like form. This again is plastered over; and, when nearly white-washed, looks well at a distance; but upon a nearer inspection, the tottering fabrick, leaning in different directions, and kept together only by the strength of the beams that unite the frame-work, discovers the infirmity of the crazy foundation to which the whole trusts for support. The stone-wall having only mud or clay for a cement, the rain soon washes it off. The stones, then loose, fall down, and the frame-work erected on the top of this wall, or rather a collection of loose stones, nods its head in different directions.

The thick flags used here, in place of tiles, add much to the mischief, by increasing the evil of an infirm foundation. That evil is further augmented, by the unnecessary quantity of these flags with which they load the roof. The flags are laid on, especially towards the lower side of the roof, four or five thick, when two would answer every purpose. The ears should lap over the third flag only two inches at most.

When the canals within this county, now begun, are finished, and the roads made tolerably safe, then, but not till then, may we look for a reformation in the architecture of the district. The price of lime will then decrease, and that of timber increase, as the conveyance that brings the one to the farm, may carry back the other to a proper market.

There are, however, a number of good brick, and stone and lime buildings within this county, lately erected: the most

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necessity of expensive applications to parliament, especially when there was no opposition to the proposed measure, would be attended with consequences highly beneficial to the public, and would remove several barriers, which, at present, obstruct the improvement of the kingdom.

most conspicuous, and the best executed that I have met with, are those upon the estate of Guy's Hospital, situate in this county. *

Societies for the Encouragement of Agriculture. There are none in this county. † This is the more to be wondered at, as this comes under the denomination of a residing county; and abounds with men of extensive landed property, enterprise, and liberality of mind. Such an institution seems to be much wished for by every man of a rational turn of thinking, with whom I have conversed on the subject; and in order to carry it into effect, nothing more seems to be wanting than just to begin; merely to hand, about a subscription paper at one of the county meetings, which I have reason to conclude would be filled up, almost instantaneously, to a respectable amount. For, on such an occasion, where is that man occuping any respectable rank in society, who would not throw aside all party considerations?

The narrow limits to which the nature of this short sketch compels me to confine my remarks, obliges me to

 pass

* The plantations upon this estate are also well attended; for every tree cut, I am informed that there are at least fifty young ones planted. This does much credit to the gentlemen intrusted with the management of it.

† The Governors of Guy's Hospital gave a premium of a piece of plate, value twenty pounds, annually, for the best crop of hoed turnips that could be produced upon their own estate in this county. This produced every visible good effect on the estate of the Hospital. Persons accustomed to the hoeing of turnips were sent for, from a distance, to some quarters where the operation had never been performed before. So far the Governors deserved much praise; but it is unpleasant to add, that at the end of three years only, this enterprising spirit, just then opening its tender buds, received a sudden check, by the premium's being discontinued.

pass over the practice of many good farmers in this district, and content myself with giving the general system practised. I have, therefore, refrained from introducing the names of individuals, since I am thus prevented from describing the minutiæ of their respective practices. I have, however, found one or two farmers, the practices of whom are so different, and, in my opinion, so superior to any other that I have met with in this country, that I must beg the indulgence of the worthy occupiers of them for bringing forward their names upon the present occasion; since I should not discharge the duty I owe to the reader, if I did not point out to him the spot in this district, where, if he pleases, he may examine the original of a practice, of which my short description, without drawings of the implements used, will give him but a very inadequate idea.

Thomas King, Esq. and Mr. John Yeald, practise the following system, on a large tract of land in the parish of Pembridge, seven miles below Kington, in this county. It was Mr. Yeald's farm, of Milton, that I more particularly examined. This farm may contain about 400 acres. That portion allotted to tillage is laid into fourteen large pieces. Seven pieces of the stiffest land form one allotment, and the other seven pieces of the lightest form another.

ON CLAYEY LAND.

1. year, plough up clover ley, of two years standing; sow drilled pease.

2. year, wheat.

3. year, potatoes.

4. year, wheat again.

5. year, oats; sow clover; let the clover lie two years; making in the whole seven years for one liming and dressing.

ON SANDY LAND.

1. year, plough up clover ley of two years standing; sow drilled pease.

2. year, wheat.

3. year, ray and vetches.

4. year, turnips.

5. year, barley; sow clover; let the clover lie two years; making in all seven years as before.

He mucks the land strongly for the turnips, on the second, and potatoes on the first system, and lays on the lime, after pease, on both.

The quantity of seed sown on a statute acre.

Wheat,	16 gallons.	Oats,	32 gallons.
Barley,	23 ditto.	Pease,	16 ditto.

Here is a crop every year, no fallow. I wish those who tell us that they cannot keep their land clean without a fallow every third year, would look at MILTON, and then say if they can find any field in all the county equally clean with this, that never has a fallow. This cannot be attributed to the soil, which is some of the worst in the county. I speak of the tillage; and in the occupation of the general run of farmers, would be abandoned to the nutriment of gorse and briers, as I am informed it was before the present tenants took it in hand.

That portion, called clay land, is a still, sulky, obstinate clay. The sub-soil, a yellow tell.

That called sandy land, is only comparatively so; since, in some places, it would be called stiff land.

The clover ley is ploughed up as soon as possible after Christmas with the new-wheeled double plough, invented

by Thomas King, Esq. and rendered still simpler in the construction by Mr. Yeald. Cross harrow, with the heavy dragger: sow pease or beans with the drill plough, from the beginning to the middle of March, at the distance of twenty-two inches. When the young shoots of the pease are about an inch above the ground, they are horse-hoed, thus: the hoe is twenty-five inches in breadth, but a vacant space of five inches is left in the center, and on each side of this space the hoe cuts the weeds for ten inches. The horse walks between the rows. The beam, by being beat, turns the hoe to one side, and the vacant space of five inches in the center of the hoe, leaves the pease unmolested, while it cuts and destroys the weeds for ten inches on each side. This destroys the weeds for some more than one-half the space betwen the rows. When the hoe comes down the next row, the other half of the space is stirred: since the space between the rows of pease is twenty-two inches, and the hoe in the whole twenty-five inches, no part escapes the hoe except the vacant space by the side of the pease.

When the pease are about four inches high, the second hoeing must take place, as it cannot be done afterwards without tearing up the young pease. The space of time that intervenes between these two hoeings will depend upon the season, and the progress that the pease have made; for it must not be delayed after they are four inches above the ground. After the second hoeing, the pease will shoot forth their branches so quick, that no weed will be able to exist near them; and the land is perfectly clean for wheat, which is sown after the pease are cut. Second crop. When the pease are removed from the field, the land is ploughed immediately. Lay it in ridges of five bouts, of six feet each; lay on the lime without any loss of time. The wheat is then sown upon these ridges, and ploughed in by gathering the ridges a second time. These two ploughings raise the

ridges

ridges so high as to form segments of a great circle, by which the water readily falls to either furrow.

When the wheat is sown, surface drains are then formed, by running furrows in various directions, to receive and carry off the water. Upon the number and judicious direction of these surface drains, on clay land especially, much, very much, will depend. Mr. Yeald is so thoroughly convinced of the importance of these surface drains, that he takes care to err on the safe side, by making a greater number than will probably be requisite. It is needless to add, that his usual good judgment is conspicuous upon this occasion, by laying the drains in such a direction as to have just full enough to carry off the water, and never lays them them so as to have a steep fall, which would enable the stream, in time of flood, to carry away a part of the soil. An object this of much importance, but which often escapes the attention of less wary minds.

The fields are interspersed with a number of steep hillocks. Soon after the wheat is sown, sheep are folded upon the tops of these hillocks, which makes the crop equally good over the whole field.

Next year the potatoes are planted in rows of six, but never less than five feet distant; the sets about one foot distant in the rows. The pease hoe is used to the potatoes once; when the weeds appear next, a plate hoe of twelve inches wide, is drawn by each side of the row of potatoes, as near as can be done with safety to the young plants. The space that intervenes between the rows is kept by the plough, all the time, in a fallow state, as if the potatoes had not been in the ground. When by repeated ploughing the weeds are effectually dispersed, the whole mould is gathered by the plough into a high ridge round the roots of the potatoes, of six feet each; and the furrow is in the center, at the distance of three feet from the stems of the plants on each side. When the potatoes have acquired their full maturity,

turity, about Michaelmas, and about a week or two before they are taken out of the ground, the sheep are turned in to eat the tops, which they do most greedily. It is observed that this food operates in a very uncommon degree in the discharge of urine, and probably other evacuations, which contributes to the prosperity of the succeeding crop of wheat.

The potatoes are taken up by a prong hoe, consisting of four prongs, or bars of iron, of two inches broad by one inch thick. A fang, in the form of a double mould-board, is erected on the top of these four bars, which throws the mould to each side. This machine is drawn by three horses or four oxen, and entering the ground below the bed of the potatoes, the whole is thrown up to the surface at once. A waggon follows this operation, into which all the hands that can be got, are employed in throwing the potatoes, that no time may be lost in sowing the wheat immediately, which is generally done the same day that the potatoes are taken up.

The turnips are sown broad-cast, pretty thick. When the turnips and weeds make their appearance, the turnip horse hoe, containing five hoes, about the size of the hand hoe, is drawn down the ridge, and destroys both weeds and turnips, over about one-half of the land. In two or three weeks time the same operation is performed across the land. The hand-hoe is sometimes afterwards used with less than half the common trouble. When the turnips are eaten off, the land is left perfectly clean for barley.*

The beautiful simplicity of the various machines, mostly of his own invention, used by this respectable and most intelligent

* The flooding of land is here most masterly conducted. The water-course three feet wide, and ploughed previous to the admission of the water; a harrow, made for the purpose, is drawn along the course when the water is there. This carries the soil to the meadows.

telligent farmer, are well worthy the inspection of the agriculturist in this district, who is desirous of arriving at eminence in his profession; and the candour and openness with which he communicated his various plans of operation to the writer of this article (as a stranger), leaves little room to doubt but that others will meet a reception equally liberal.

Seed Corn. Changing all kind of seed is here found to have a good effect; wheat in particular. Men of much experience say, that great regard ought to be paid to the soil on which the seed to be sown grew. If the land meant for wheat be a strong clay, the seed should be from as light a sandy soil as it can be had: but the reverse, if the land be light. Some farmers have their seed wheat from the hilly parts of Gloucestershire and Oxfordshire. The additional quantity of grain from seed thus obtained is scarce credible; some say double, but one-third more than could be had from their own seed, is spoken of with much confidence. This is a subject the more entitled to attention, as the experiment may be tried with scarce any additional expence.

Hedge-row Timber — is most plentifully dispersed over most of the district. The elm is the most general, because it is found the most vigorous in recovering from the wounds which it receives every third year, when lopped. The elm is found to grow faster on sandy than on clayey land; but there it also decays much sooner, and the timber is not so valuable. The natural strong constitution of the elm, which enables it to recover of the wounds which it receives in lopping, has made that operation too general; for amputation is performed on other trees not so able to bear it. The oak does not relish this treatment; and the firs of all descriptions never recover it; yet all are often obliged to submit to this fashionable dressing.

The lopping of hedge-row timber, while it h
beauty of the country by doing a violence to nature
beneficial to all vegetables that are placed immediate
the trees: and since the boughs are requisite to m
hedges, to abolish the practice would be impossib
plant such trees only as would bear it in the hedge
be rational.

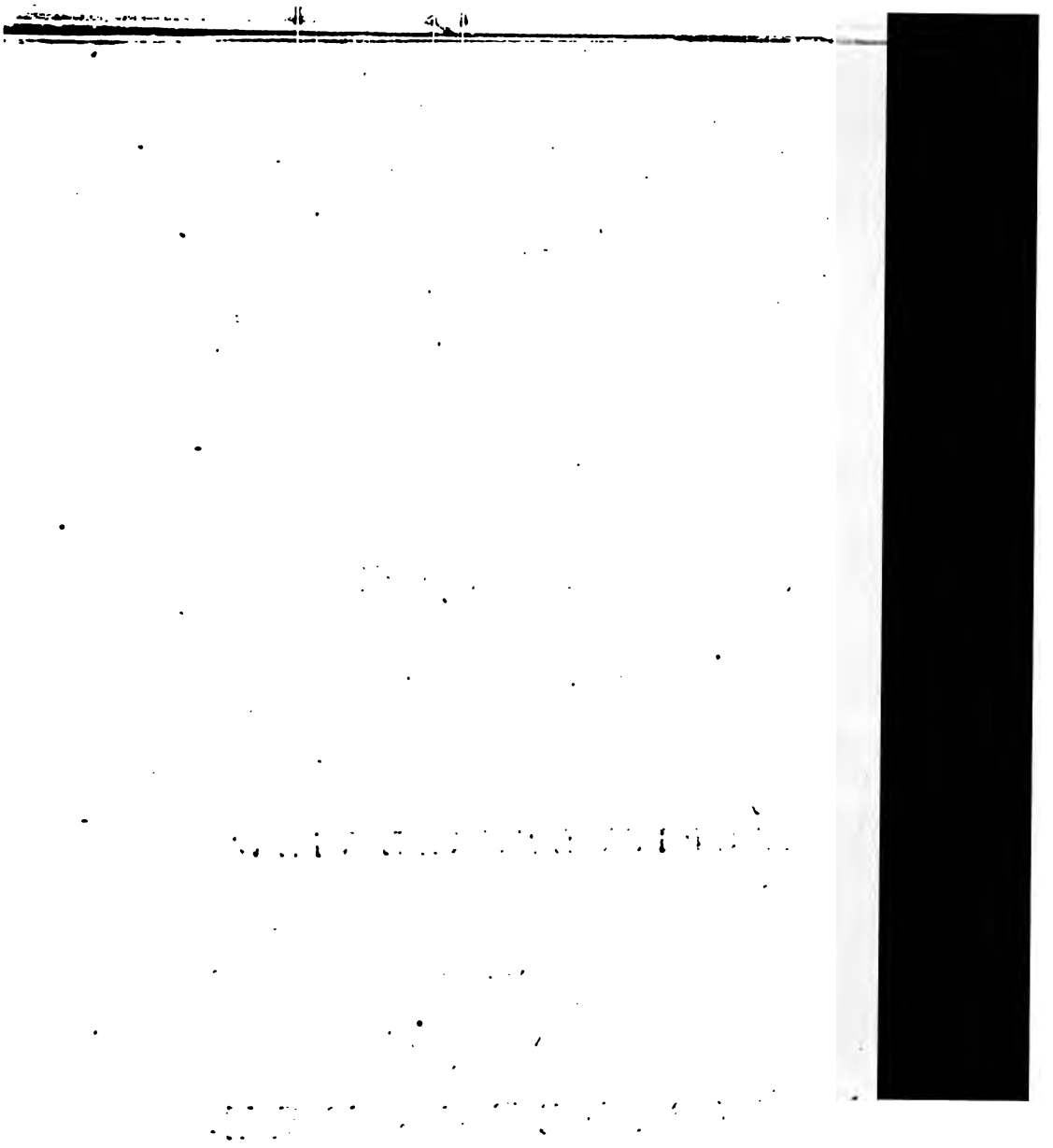
APPENDIX

TO THE

AGRICULTURAL VIEW

OF

HEREFORDSHIRE.



APPENDIX.

ON INCLOSURES.

E invariable rotation of crops in all the common fields is, first year, a
v; second year, wheat; third year, pease or oats; then begin again with
ow.

is not requisite to point out to an agriculturist, the wretched state of
on in a country in which the above destructive system prevails. The
rtune is still increased by the humiliating reflection, that some of the best
in England is thus condemned to lie idle every *third* year; and that by
cies of rebellion against nature, her children are robbed of a considerable
on of that ample provision which *she had made for them.* The farmer
e lot it is to occupy land of this description, is compelled to pay *three*
rent and *taxes* for *two* years enjoyment; and what is of greater impor-
to him, he must maintain his family, servants, cattle, and implements
sbandry every third year, without having any return from his land. He
vs this course of husbandry, not through *choice*, but by *compulsion*; and
rect opposition to the most clear conviction of his own mind, because it
"*custom of the parish*;" for by a remarkable feature which is interwoven
the constitution of this country, and which has obtained a priority to any
s *laws*, "*old customs* must not be broken." When a farmer per-
es in a system of husbandry destructive to himself, as well as hurtful to
general interest of society, through *stubbornness*, and resists every advice
dmonition, a principle of resentment which in some measure, lurks even
e meekest breast, extricates the dejected mind from the unpleasant sensa-
excited by the hardship to which folly subjects man; but, when from no
motives than a *forced* compliance with the barbarous usage of remote
—when, in respect to the cultivation of the soil especially, the human
seems to have been in a state of infancy, we see the farmer obliged to
the half, or third of the food of society in the ground, sensations are
ed, which are easier conceived than expressed.

here are, however, few subjects on which men differ so much as the advan-
to be derived from inclosure of *common fields*; and since a great part of
est land in this county still remains in that state, I have taken the liberty
bmitting to the Honourable Board, the arguments for and against such a
re, so far as I have been able to judge from the information which
e received concerning it in this district.

I. The

The inclosure of common arable fields stands in a different predicam
the inclosure of waste lands; which, it is admitted on all sides, *must*
the quantity of grain over the kingdom, by enabling the farmer to ra
on land that had before lain in grass; and which, while in its comm
was most effectually locked up from the operation of the plough.
inclosure of common arable fields is said to have a direct contrary te
by enabling the farmers to turn into pasture, land which by the custo
township he was obliged, while in common, to keep under corn. Thi
indisputably true. But the inclosure of common fields is said to be
with a calamity no less fatal than that of depopulating the kingdom.
true, is indeed a most alarming circumstance, an evil for which eve
possible advantage connected with it would make but a very inade
compence.

The land, say the enemies of inclosure, that used to find employ
thousands in the cultivation of the soil when in tillage, is now incl
turned into pasture. A large *giant* of a farmer seizes upon several
nements, whole villages are levelled to the ground, and the county
lated.

The evil is not confined to the country, the next market town feel
effects of inclosure. The little farmer, to whom ten or twenty shill
an object in making up his rent, brought his poultry, pigs, eggs, &c.
ket, and the towns were then well supplied; but the great farmer thi
trifles beneath his attention, hence the markets are neglected.*

Such arguments as are addressed to the tender feelings of humani
to be narrowly watched, and cautiously admitted by every man who
in such a situation as to render his decisions of importance to the com
because such arguments have an imperceptible tendency to over-rea
policy, and by divesting the judgment of some portion of her won
city and penetration, obtain her assent to measures of which the in
voice of a steadier wisdom cannot approve. If it be an advantag
public to keep the common fields in their present state, it would
great additional advantage to turn the fields that are now inclosed i
mon fields, for what is good for a part, is good for the whole. The
I know would not in that case take the land at half the present rents
market towns would feel a want of provision which they have not y
rienced from the very opposite cause to that from which the enemies
sure apprehend such danger.

Common fields are such an insurmountable obstacle to all impr
that nothing but early habit and custom could render it sufferable to

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* When a man, solicitous about the happiness and welfare of his country, has l
recover from the shock which such a picture of approaching woe and misery as must
the inclosure of common fields has made on his distressed mind, he will, in order to
judge of the number of his countrymen that are to be subjected to this calamity, ask
portion the common fields bear to the inclosed in this kingdom: he will be told not a fi
He will then probably recover himself so far as to reason thus: forty-nine people in this i
rable, for one that is comfortable; forty-nine market towns starving for want of provis
that is well supplied; forty-nine villages pulled down, for one that has been left standi
inhabitants of these inclosed districts never felt any of those hardships, nor would th
our common fields at half the rent they pay for their inclosed lands.

pier. In respect to the community at large, this species of property is such a draw-back on the national improvement, that nothing but the small proportion which the open bears to the inclosed land, could enable the agriculture of this kingdom to make such rapid advances as it has done within the last half century, clogged as it has been by this cumbersome weight.

Although the inclosure of common fields will no doubt put the land in a way, by proper management, of producing double the quantity of food for society that they do in their present state. Yet all this, in the estimation of sound policy, will avail very little, if upon investigation it shall be found that inclosures, even in the smallest degree, give countenance to the introduction of so dangerous a cankered worm as that of lessening the number of our people. At first view, inclosures undoubtedly do authorise such an idea. For let us suppose a township that contained 500 acres of common arable fields, besides its portion of pasture to be inclosed, and the whole let to one man, who turns all the arable land into feeding pasture ground, and stocks it with bullocks and sheep. Allowing five persons to every 100 acres of tillage, the former inhabitants amounted to twenty-five persons; but now that the land is inclosed and stocked with live stock, five persons will be sufficient to look after them. Here we see twenty persons sent a drift into the wide world, without any employment, or visible means of subsistence. The man who could behold this without being affected, must possess a very convenient portion of taciturnity. These five hundred acres are now so far lost to the community at large, that no person but the proprietor and the occupier can possibly reap any advantage from them. So far, the picture is unquestionably gloomy, and any further, upon this subject, the general run of philosophers * do not extend their speculations. But let us see to what use the owner or occupier of these 500 acres of tillage has applied them. To feed oxen and sheep. Well. Perhaps 200 head of cattle, and 500 sheep, may compose his stock. Two hundred carcases, to pass through the butcher's hands, will find bread for some people through the whole year; 200 hides to the tanner, to the currier, to the leather merchant, and to the shoemaker; who again will find a sale for the buckle maker's goods, besides the tallow chandler, &c.

The 500 sheep, at seven pound a fleece, (3500lb. of wool,) will contribute a little to the maintenance of the wool merchant, the woollen manufacturer, the comber, carder, spinner, weaver, tucker, dyer, colourman, dresser, woollen-draper, taylor, and button-maker; all these, together with their journeymen, apprentices, families, and the respective tradesmen which they are enabled to employ, again will partake of, and reap an advantage from these 500 acres, which in a paroxysm of mistaken patriotism we had given up in a great measure lost to the community at large. Were we to make a minute inquiry into the number of our people that now make bread from these 500 acres, we would probably find it to be double to the twenty-five that it had maintained while in tillage, most of them bringing up young families in comfort; whilst by the taxes upon the various articles they consume, they contribute insensibly their mite towards the necessary expences of supporting that government by which they are protected. While the wool, hides and tallow,

of

* Dr. Price, Mr. Addington, &c.

The number of baptisms during two periods of five years each, the fi
ginning with 1760, the second with 1765, in a great number of re
inclosed parishes, from different counties, together with the baptisms i
parishes not recently inclosed, in the same counties respectively.

COUNTIES.	Baptisms in Parishes lately inclosed.			Baptisms in Parishes lately inclosed.		
	Numb of Parishes.	1st Period.	2d Period.	Numb of Parishes.	1st Period.	2d
Northumberland -	2	349	441	32	5977	6
Durham - -	3	525	600	10	2735	3
Cumberland - -	3	956	1147	20	2431	2
Shropshire -	3	390	517	17	1729	1
Norfolk - -	8	447	558	69	4384	5
Essex - -	2	165	248	19	1517	1
Bedford - -	3	151	221	6	981	
Bucks -	4	343	335	8	1490	1
Leicester -	7	1255	1450	8	1021	1
Stafford -	2	320	356	10	2394	2
Warwick -	12	1269	1609	7	1154	1
Derby and Berks	5	546	621	25	2135	2
Middlesex -	1	34	47	4	827	1
Worcester -	7	1490	1946	17	2011	2
Gloucester - -	10	463	588	175	13163	14
Wilts - -	13	1888	2187	48	5774	4
Hants - -	4	213	267	15	3008	3
Totals	89	10804	13138	490	52731	57
Increased nearly as		100 to	121	as	100 to	

Hence we find that from 1760 to 1765, the number of baptisms i
eighty-nine parishes in which inclosures had been made, was 10804. I
some parishes, from 1775 to 1780, the number of baptisms was 13138, t
for every 100 that was baptised during the first period there was 121 d
the second period. But in the parishes where no inclosure had been mad
increase was only as 100 is to 109; that is, for every nine that had incr
where there was no inclosure, there was twenty-one, where there was
closure in the parish. This valuable little pamphlet exhibits a most cle
incontestable proof that there was an increase in the number of the peo
every parish in which inclosures had taken place, in a greater proportio
in other parishes in the same counties in which inclosures had not taken
The facts are clearly stated, the reasoning is logically just, and the concl
are irresistible.

The tendency which inclosures were supposed to have to depopula
country being the only arguments that were brought forward in

part of that barbarous custom of keeping arable lands in common fields, i
with no small degree of satisfaction that every well-wisher to his country
here perceive the fact to be quite the contrary; and that while inclosure,
admitting of a superior mode of cultivation, will enable the land to prod
double the quantity of food for society that it does in its present state, t
is an increase in the number of our people, to promote, collect, and enjoy
increase in the productions of the earth.

The increase in population, in consequence of inclosure, is easily accou
for.

No sooner is land inclosed, than it lets for nearly double the rent that i
when it was in common fields. If it be asked how the tenant is able to
this advance in the rent, because the land is the same after, as before it i
closed, (the genius of the soil undergoes no change) it may be said in ans
that by a superior mode of cultivating the soil, he makes it produce doubl
quantity that it had done when common. Then he must employ a gr
number of hands than was formerly employed on the same land. This
fact the case, for the the bulk of the land, after inclosure, is still kept i
lage, and in order to render it productive, double the number of people
be employed. The land before used to be sown with one ploughing, an
corn and weeds were left to shift for themselves in the best manner they
till harvest. Not a day's labour in the field for man, woman, or child, fro
time the seed was put in the earth, until it was ready to convey home
short, by the rules of the old school, which mostly prevails in the con
fields, the farmer considered his work as quite finished at that very stage
in which the good farmer of the present day looks upon his principal l
as only beginning; and that portion of the earth's productions, which u
be left to the support of weeds, is now converted into the maintenan
women and children, now become the successful rivals. By their labo
earth is enabled to bring forth such an additional quantity of grain and
as is not only sufficient for their own support, but a superabundance
where it undoubtedly ought to go, into the farmer's pocket. If the one h
the common fields in the kingdom should be turned into pasture, and the
half only kept in tillage according to the improved mode of cultivation,
would be the same quantity of grain raised, and full employment for an
number of people to that which now lives upon the whole; besides the
number of manufacturers to which the wool, hides, and tallow, of the
tional number of sheep and cattle which the other half would produce
than we have now in the kingdom, must give employment. Common
become hurtful to population, because the little farmers who rent from
to fifty pounds a year employ no labourers, but with the assistance of
his wife and children, does what little work is done on his land But ever
cannot get a farm, and if he could, he cannot stock it. Then if he cann
a farm of his own, there is no employment for him. He cannot the
marry, because he has no visible means of providing for a family. He
fore leaves the country, and retires to some large town. Hence the ra
crease in towns, while the sinews of the national strength, its agricultu
enfeebled in proportion.

Let us now look to that obnoxious character, a large farmer: he give
emplo

loyment to twenty or thirty people, besides his own family, through the le year. A certainty of being able to provide for the demands of the day, ls forth an inducement to marriage, which is still strengthened by the re- ion, that a wife and children, so far from being a burthen, will be an assis- e to a man, because every good farmer will always find employment for wives and children of his labourers when they are able to work. Most of the agers in this county live much more comfortably than little farmers in ge- l. The only advantage which *those* have over *these*, is, that they can be for a day when they please: but it remains yet to be proved, that idleness tributes to the happiness of man, although the contrary be pretty evident. one man to have so large a tract of land, and so many people obliged to y his orders? To this it is to be replied, that in farming, as in most other upations, men of the greatest talents generally get to the head of their fessions, while others are left by the way; and whoever will examine the nt of the intellects of the general run of mankind, employed in any branch usiness, will find, that Nature, in allotting to each his respective portion of gifts, had it in view that the province of ninety-nine out of an hundred to receive, not to give orders. In respect to the humility of so many g obliged to obey one man, every officer in the navy or army might make same objection; yet the first nobility in the nation, our sovereign's sons excepted, chearfully submit to the orders of any superior officer whom nce has placed over them. The man who feels obedience unpleasant, is not y likely to have it soon in his power to command.

have intruded upon the reader's patience the longer on this point, because now there are many men of good sense, property, and worth in this ty, who entertain very different sentiments on this subject from those h are here delivered.

OF THE GUTTIE IN OXEN AND CALVES, WITH ITS CURE, AN METHOD OF PREVENTING IT IN THE CASTRATION OF CAL

THE excellency of the Herefordshire breed of neat cattle is so un acknowledged, that it was with no small degree of concern I lear many of them were subjected to a premature death, in consequence of skilfulness of the persons who perform the operation of castration on calves. The distemper is here called the GUTTIE. When it had onc on an ox, it was considered as incurable; and many hundreds have fa tims to the dreadful malady. Having heard that Mr. Harris, s Wickton, had been almost universally successful in the cure of it; a further informed, that the mode of cure was a mystery known only gentleman, I waited upon him, and, at my most earnest request, he conformity to that liberality which always accompanies superior tal the whole open for the benefit of society, in the following most paper:

TO MR. CLARK, BUILTH, BRECKNOCKSHIRE.

SIR,

"AS I understand that the Honourable Board of Agriculture make public every kind of instruction that may be of benefit to the fa society in general, I have taken the liberty of sending you an accou cause and cure of the GUTTIE in oxen, a complaint which is very co this neighbourhood. As I have never seen this complaint treated of person, you have my permission to make what use of it you please. I s add, that I am neither an ox-leech, nor a professional man, but a Here farmer, And your very humble servant,

JOSEPH HAR

THE symtoms of the *guttie* are the same as an incurable *colic volvulus*, or mortification of the bowels. The beast affected with this complaint will kick at its belly, lie down, and groan: it has also a total stoppage in its bowels, (except blood and mucus, which will it void in large quantities) and a violent fever, &c. To distinguish with certainty the guttie from the colic, &c. the hand and arm of the operator must be oiled, and introduced into the anus, through the rectum, beyond the os pubis, turning the hand down to the transverse and oblique muscles, where the vessels of the testicles enter the abdomen. There the string will be be found united to the muscles, and easily to be traced to the stricture, by the hand, without pain to the beast.

This stricture, or guttie, as it is called, is occasioned by an erroneous method of castrating the calves, which the breeders practise throughout Herefordshire, and is as follows; they open the scrotum, take hold of the testicles with their teeth, and with violence tear them out, by which means all the vessels thereto belonging are ruptured. The vasa deferentia, entering by the holes of the transverse and oblique muscles into the abdomen, pass over the ureters in acute angles; at which, turning by their great length and elastic force, the peretonæum is ruptured, the vasa deferentia are severed from the testicles, and springing back, form a kind of bow from the urethra, where they are united, over the ureters, to the transverse and oblique muscles; and there again unite where they first entered the abdomen. The part of the gut that is tied is the jejunum at its turning from the left side to the right, and again from the right to the left, forming right angles under the kidney, and attached to the duplicator of the peretonæum, to which it was united, where the rupture happened. There the bow of the gut hangs over the bow of the vasa deferentia, which, by a sudden motion, or turn of the beast, form a hitch or tie of the string round the bow of the gut (filled with air) similar to what a carter makes on his cart-line. This causes a stoppage in the bowels, and brings on a mortification, which, in two or four days at most, proves fatal.

To this accident is the beast, castrated as above, liable from the day that he was castrated till the time of his being slaughtered. I have cut them of the guttie, from the age of three months to nine years. The only method of cure that can be safely ventured upon, is to make a perpendicular incision four inches under the third vertrebra of the loins, on the left side of the ox, over the paunch, or stomach, and introduce the arm to find the part affected; if possible keep the beast standing, by the strength of proper assistants. The knife I make use of to sever the string, is in the form of a large fish-hook, with an edge on the concave side, fixed to a ring which fits the middle finger, which crooks round the back of the knife, the end of the thumb being placed on its edge. The instrument thus secured in the hand is a certain security against wounding the surrounding intestines. With this instrument, I divide the string, or strings, and being out, one or both as circumstances require. Here it is to be observed, that great care must be taken by the operator not to wound or divide the ureters, which would be certain death. I then sow up the divided lips of the peretonæum very close, with a surgeon's needle, threaded with strong thread, eight or ten double, sufficiently waxed; and also the hide, leaving a vacancy at the top and bottom of the wound sufficiently wide to introduce

troduce a tent of surgeon's tow, spread with common digestive and traumatic balsam, covering the incision with a plaster made of the white of eggs and wheat flour. The wound thus treated and dressed every day, will be well in a fortnight. The medicine I give to remove the stoppage in the three stomachs, occasioned by the tie, and carry off the fever, is four ounces of glauber salts, two ounces of cream of tartar, one ounce of sena, infused in two pounds of boiling water; adding half a pound of oil olive, working it off with plenty of gruel, mixed with a large quantity of infusion of mallows and elder bark. Administer the gruel and infusion, for at least two or three days, by which time the beast will be well; will eat his provender and chew the cud; and will for ever be relieved, and remain safe from this fatal disorder.

The following simple and easy method of castration will effectually prevent the guttie. Open the scrotum, loosen out the testicles, and tie the several vessels with a waxed thread, or silk, or sear with a hot iron to prevent their bleeding, as is the common way of cutting colts. This method can never displace either the vessels of the testicles, bladder, kidnies, or intestines; all of which remain covered or attached to the peretonæum, or lining of the abdomen of the beast, which renders it impossible that there should ever be a stricture or tie on the gut.

JOSEPH HARRIS.

Wickton, near Leominster, Herefordshire, March 28, 1794.

MISCELLANEOUS OBSERVATIONS ON HUSBANDRY.

THERE are some parts of this district, especially near the river Wye, where they have no water to turn over the land: hence they feel not only a deficiency of hay, but of latermath grass for their stock in autumn. Artificial grasses will, in some degree, supply the want of hay, and that of the latermath grass might be removed thus: If, on the land meant for fallow, cabbages were planted in April, in rows, at such a distance from each other, that the operation of keeping the land clean from weeds, by ploughings, might be conducted as at present, from the middle of August to that of October, these cabbages would maintain the principal part of their stock; and the grass, which at present they use during these two months, might be reserved for the succeeding part of the autumn and winter. At that season, before the wet weather set in, the cabbages might be eat off the ground by hurdles, and the wheat sown on each parcel successively as the land was cleaned. The injury which the cabbages would do to the land, by exhausting it, would be more than compensated by the manure of the cattle while eating the crop.

Fallows here are made in a manner that admits of much improvement. Th

plough

plough is too sparingly used. Unfortunately the idea has gone abroad, that the intention of a fallow is to give the land rest!!!—How opposite to the universal command of nature, who has ordered every spot of the earth to bring forth its annual increase! The intention of the husbandman ought to be, in making a fallow, to destroy the native weeds of the soil, that he may plant more profitable crops in their place. Yet here they are left so green as to feed sheep for a considerable part of the summer. Strange infatuation, that for the paltry consideration of a few shillings worth of grass, the weeds should be suffered to exist in the ground, to injure the succeeding crops, and, in some degree, to frustrate the very intention of a summer's fallow.

There is great room for improving the breed of horses in this county. The Derbyshire kind would suit this district extremely well. Many are annually brought from thence. An immense sum of money might be saved, by introducing that or some other good breed, and rearing their own horses. There is, however, little prospect of such an event taking place, since the whole of the farmer's ambition is confined to the selection of the best sort of the inestimable breed of oxen, in which this county abounds. The worthy inhabitants, however, have not committed any great blunder in making the ox their favourite hobby-horse. Any attempt to change the present breed of neat cattle, would exhibit the most glaring instance of folly and profligacy.

The Herefordshire breed of sheep may be said to be perfect of its kind; the animal is compact, well built and healthy; and the wool surpasses, in fineness, any other in this quarter of the kingdom. The larger weighs from seventeen to eighteen pounds a quarter, the fleece from four to five pounds; but those kept on the old hilly pasture considerably less. Yet the superior quality of the wool, not making a full recompence for the inferiority of the quantity, and the smallness of the carcass, the time seems fast approaching when this breed will be wholly extinct, in order to make way for a more profitable one.

FINIS.

SUBSTANCE

OF

SIR JOHN SINCLAIR's ADDRESS

TO THE

BOARD OF AGRICULTUR

ON TUESDAY THE TWENTY-NINTH OF JULY, 1794:

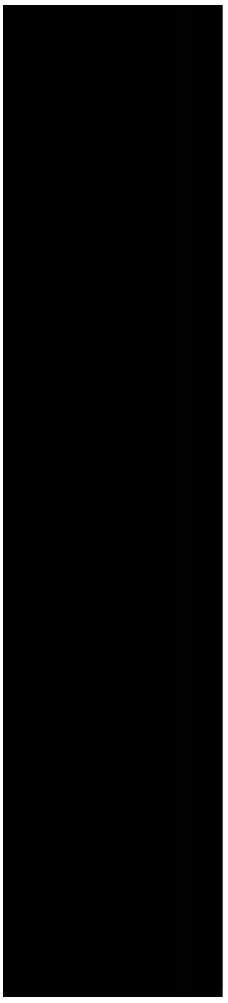
STATING THE PROGRESS THAT HAS BEEN MADE BY THE BOARD, AND THE ADVA
THAT MAY BE EXPECTED FROM IMPROVING THE TERRITORY OF THE KINGD

Omnium rerum ex quibus aliquid adquiritur, nihil est Agricultura melius, nihil nihil dulcius, nihil homine libero dignius. CICERO DE OFFICIIS, I. C

THAT he considered it extremely necessary, for any person who filled tuation in which he happened to be placed, previous to the Annual Adjourn the Board, to give a short statement of the business which had been transacte course of the Session, and of the progress that had been made in carrying important objects for which the Board was constituted,

That at the commencement of the present, being the first Session after blishment, the attention of the Board had naturally been directed, to the form those Bye-Laws which were to regulate its future proceedings, the original s which had been drawn up, with great attention and ability, by a Noble Lord HAWKE) to whose zeal and assiduity the Board, in that and in other respects, infinitely indebted.

That a great variety of important communications had been transmitte Board from many quarters, both at home and abroad, on all the different top nected with Agricultural Inquiry, furnishing a number of valuable hints, whic be of essential service in promoting the improvement of the country. These hint served, might either be separately printed, or incorporated with the Reports of th That the Committee appointed " to take the Present State of the Waste La Common Fields of this Kingdom, and the probable Means of their Impro under their Consideration," had already made great progress in that important and he had no doubt, would, when the Board re-assembled, have a Repor fully explaining the ancient laws respecting the division of such lands, and t means of facilitating them in future; and that the Board was already in poss a very interesting and able Paper, drawn up by one of its Members, (JOHN SON, Esq. Surveyor-General of the Woods and Forests) which had throw light upon that subject.



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Above all, that the progress made in the Agricultural Survey of the King
basis of all the measures which the Board might think it advisable to recom
he attention of the Public) had surpassed the most sanguine expectations.
le kingdom had been assigned in districts to different Surveyors, from each of w
parate Report was required. Such a plan had never been formerly attempt
country; and many doubts were entertained whether it would be possible to
en in Great Britain, in any reasonable space of time. He had the pleasure,
, of acquainting the Board, that seventy-four Reports had been already
and were either printed or now in the Press, and that the remainder were in
ate of forwardness, that they might soon be expected; and, consequently, w
ive months from the Establishment of the Board, this great object would be
d. That to the credit of the Gentlemen who engaged in this laborious u
ing, a considerable number of them would accept of nothing for their tr
the remainder were satisfied with sums, in general, scarcely adequate to th
ces they had incurred. That the Reports they had given in, were not
sidered as complete Systems of Husbandry, but merely as Chapters of a
ork, distributed at present, as affording the readiest means of collecting farth
mation. That the circulating of 80,000 Papers, on so popular a subject as t
riculture, must have a strong tendency to direct the public attention, in a ver
ar manner, to that object; which, indeed, had already sufficiently appeared,
anxiety to procure those Papers, and from the demand which had lately aris
ks on Agriculture.—That about 100 Reports had been already re
, the margins of which were filled with many valuable hints and observa
t he had no doubt a considerable number of the Reports in circulation wo
rned with remarks of equal merit. The Board would thus have under its in
at once, not only very interesting accounts of the present state of the King
a complete collection of all the past skill and experience of which the Co
s possessed, in matters of Husbandry, but probably every suggestion tha
ingdom was master of, respecting the means of its future improvement: "a
of useful information, of which it cannot with justice be asserted, that any
Nation has ever yet been possessed."

In regard to the use that ought to be made of the information thus accumu
the labour and exertions of so many active and intelligent Individuals, ther
o points which he begged leave to submit to the consideration of the Board.
at they ought not to suffer the public attention to waste itself, previous to
mmunicating that information to the Country; and, Secondly, that inste
ttering away the valuable treasure they have thus obtained, in partial Re
ey should endeavour to condense it into one Great System.

To explain more fully to the Board the idea which he had formed of a Genera
ort, he had drawn up a Plan, stating the various subjects to be treated of in it
he order in which they might be arranged, and which he flattered himself it w

PLAN of a G
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Chap. 25.

ap. 27, Watering Land, or Artificial Meadows, and a comparison between ther
ther Pastures, in regard to quantity and quality of Produce.
ap. 28. Gardens and Orchards, and the Diseases incident to Plants.
ap. 29. Woods and Plantations.
ap. 30. Of Waste Lands, and the means of their Improvement, whether b
ring them Arable—converting them into Water Meadows, or Pasture, or int
tations.
ap. 31. Of the proper System to improve Waste Lands, either by privat
iduals, or public companies: with a view of increasing the population, as well as th
ce of the country.
ap. 32. Roads, Public and Parochial; and Navigations connected with Agr
ul Purposes.
ap. 33. Markets, domestic and foreign; and on the advantages of establishin
formity of Weights and Measures.
p. 34. Effects of Commerce, Manufactures, and Fisheries, on Agriculture, an
vantages of their union together.
p. 35. Of Manufacturers residing in the Country, and being occasionally em
d in the cultivation of the soil.
ap. 36. Of the Poor, and the means of employing them in the operations
ulture.
ap. 37. The Corn Laws, and on the policy of encouraging a Surplus of Gra
xportation, after supplying the Consumption of the Country.
ap. 38. Of Agricultural Legislation and Police.
hap. 39. On the Price of Provisions, and the Laws for encouraging the Sale,
ufacturing the Produce of the Country.
ap. 40. Miscellaneous Observations.

CONCLUSION.

ap. 1. Obstacles to Improvement, and the means of removing them.
ap. 2. Hints of Improvement from Foreign Countries.*
ap. 3. Means of exciting a spirit of Industry and Improvement in the Labourc
armer, and the Landlord: and whether Public Encouragements are necessa
at purpose.
ap. 4. General View of the Agricultural Produce of the Kingdom.
ap 5. Resources of the Nation, from the farther Improvement of its Stock a
itory.

*Many useful hints may be got from other countries; at the same time it is certain, that even foreign
knowledge, it is to England that the revival of Agriculture is to be ascribed.—See the French Encycl
d'Agriculture*, where, on the authority of the Marquis de Mirabeau, we are told, "Les Anglois, *auxq
ont fait le retablissement de l'Agriculture en Europe*, comprirent les premieres, qui l'art que etoit le fondem
tous les autres, etoit le pivot sur lequel devoit rouler le commerce."

The Spanish Writers are not less sensible of this truth. A very ingenious gentleman of that Country, D
JUAN VALCARCEL, of the City of Valencia, seems well convinced of the fact. "It must be ackno
edged, (says he) that England has opened the eyes of other nations. These Islanders, whose natural mel
only renders them pensive, after trying so many schemes to become powerful, have discovered at last t
is Agriculture alone which forms the source and origin of their greatness. They have added wings

In order that the General Report might not be drawn out to too great a len is proposed that an Appendix shall be annexed to each chapter, for the pur containing a number of facts and observations, which, though tending to illustr subject treated of, might, in the opinion of some, be considered of a less inte nature.

That besides the General Report, it would be expedient to reprint and to p the various Agricultural Accounts now in circulation, with every possible Corr and Improvement, and in such a form, that every individual may have it in his to purchase, on reasonable terms, either the Account of his own particular e or the Reports relating to all the different counties, or the General Report state of the kingdom at large, as he may find most desirable.

He could not conclude, without attempting to give, even in this early s their proceedings, some general idea of the public benefit to be derived from t provement of the territory of the country.

It is not difficult, even on such data as have been already obtained, to make lations sufficiently accurate for every useful purpose, respecting the probable tages to be expected from the improvement of the kingdom, in regard to Inco Capital—and Population: and perhaps a short statement of such advantages awaken more the public attention, and be more satisfactory to the generality people, than long disquisitions. He had therefore embraced the earliest oppor of throwing together some ideas upon the subject, for his own private satis and for the consideration of the Board and of the Public.

Of the different Reports given in to the Board, that from the County of Ca is by far the most minute, the Surveyor having, with great labour, gone from parish, and in general having obtained sufficient information in regard to Stock, P and Population. At the conclusion of his Report, he recapitulates the increase which may be expected, by improving the cultivation of 319,300 acres in that co of which the following is an abstract.

Number of Acres.	Description of the Land.	Increased Rent per acre.	Total Incre
150,000 - - - -	Waste and unimproved Fen	£ 0 10 0	£ 75,000
132,000 - - - - -	Open and Common Field Arable Land - - - -	0 8 0	52,800
19,800 - - - - -	Inferior Pasture - - - - -	0 9 7	9,487 1
7,500 - - - - -	Of Upland Common - -	0 11 0	4,125
8,000 - - - - -	Of Fen Common - - - -	0 10 0	4,000
2,000 - - - - -	Of ½ yearly Meadow Land	0 8 6	850
319,300	At an average about 9s. per acre.		£ 146,262 1

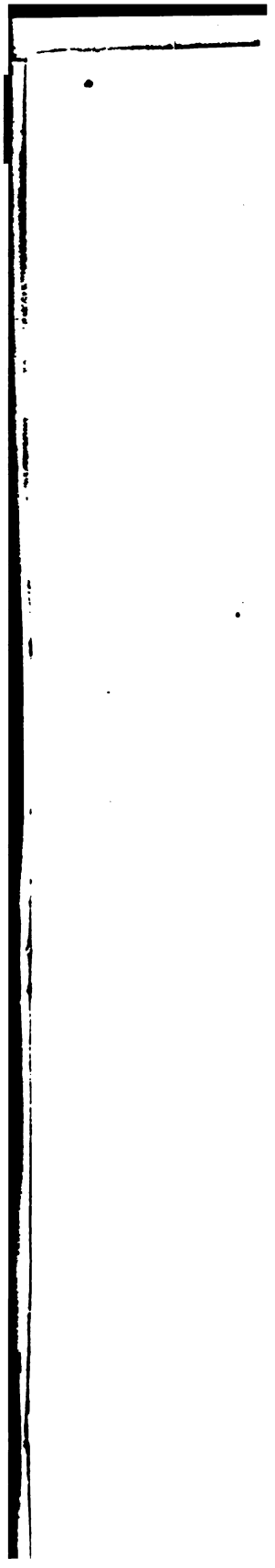
e to contend, that these rents are exorbitant, or
illing to pay for the advantage of having his land
of improvement. This seems, therefore, a fair
calculations may be built.
is evident, can only arise from increased produce,
y from the former; and it is not unreasonable to
of increased produce alone, thrice the increased
ge, deducting smaller sums, 438,000l. per annum.
ation, it is sufficient to remark, that, stating the
at 438,000l. is only at the rate of about 1l. 7s. per
too high an estimate.
tion this would make to the National Capital, the
plied by thirty;—hence the total value, at thirty
3,140.000l.
opulation, the result is equally satisfactory. Ac-
1ol. at an average, is sufficient for every human
cluded; consequently 438,000l. of additional pro-
3,800 additional inhabitants.
Cambridgeshire, is then as follows:

d, ...	319,000
of about 9s. per acre, . .	£ 146,262
acre, ...	£ 438,000
t 30 years purchase of the produce,	£ 13,140,000
. . . . .	43,800 souls

ng the extent to which improvements may be car-
cessary to state, that according to the computation
bridge-shire is a 70th part of England and Wales,
to be multiplied by seventy, in order to ascertain
on of the southern part of the United Kingdom.
d be as follows:

oved, ...	22,351,000
e of about 9s. per acre, .	£ 10,057,950
per acre, ...	£ 30,173,850
ital, at 30 years purchase of	£ 905,215,500
n, ...	3,017,385 souls.

to be improved, namely 22,351,000, one half
nd the other half of common fields and lands under
eat as would be the benefit to be derived from the
s the latter from which the greatest expectations
tained.



The expence of improving 22,351,000 acres, at 4l. per acre, would amount to - - - - -

Interest thereof at five per cent - - - -

These sums are to be deducted from 905,215,500l. of additional Natio
30,173,850l. of additional National Income.

That here it was impossible not to advert to the astonishing difference,
nding eighty-nine millions in Improvements at home, or in foreign con
e expenditure of that sum in war, it would be accounted a most fortuna
mbursement, if we could secure any territory, by a commercial inte
hich, five millions per annum could be gained; whilst, at the same time
cessary to pay at least five millions of additional taxes. But if that
d out at home, or rather, if private individuals were encouraged to e
their wealth and capital in the internal improvement of the country
w taxes being necessary, the old ones would become lighter and mor
l instead of dragging five millions per annum, at an enormous distan
quently with much risk and expence, thirty millions would be produce
n domain, and always at our command. That these were truths wh
ften vaguely talked of, and consequently made little impression, but
w likely to be probed to the bottom, and established beyond a doubt.

He should conclude with remarking, that, with such a prospe
sperity resulting from the labours of the Board, he was pers
ember of it, would persevere with alacrity and zeal, in completing the
king in which they were engaged: the effect of which would be felt
ered, whilst any vestige of Civilization, of useful Industry, or of Politic
ould be traced in Europe.*

* The following is an Abstract of the Agricultural State of Warwick-shire (known to be
tivated counties in England) as reported to the Board of Agriculture.

nd in tillage—Wheat, 25,700—Fallow 15,000—Turnips and Vetches 15,000—Barley, O
Beans, &c. 41,500—Tillage Lands grazed, 45,000—Ditto in Grass and mown for H
12,350. Total - - - - - - - -
rdens 4000—Meadows 82,000—Woods, Canals and Rivers, 50,000 - -
eads supposed to be - - - - - - -
en Fields, 57,000—Pasture and feeding Lands, 150,000—Waste Lands 110,000 -

On the supposition that only 1l. 7s. could be obtained from 317,000 acres of improvabl
dditional produce from 154,530 acres under tillage, which might certainly be expecte
allows, &c. the result would be, 505,215l. and as Warwick-shire is a 60th part of Engla
tal additional produce of the southern part of the Kingdom would, on that supposition,
annum.

GENERAL VIEW

OF THE

AGRICULTURE

OF THE COUNTY OF

GLOUCESTER.

GENERAL VIEW

OF THE

AGRICULTUR

OF THE COUNTY OF

GLOUCESTER,

WITH OBSERVATIONS ON THE MEANS OF ITS IMP

BY

GEORGE TURNER, OF DOWDESWEL

Gt. Brit.

DRAWN UP FOR THE CONSIDERATION OF THE BOARD OF AGR
AND INTERNAL IMPROVEMENT.

LONDON:
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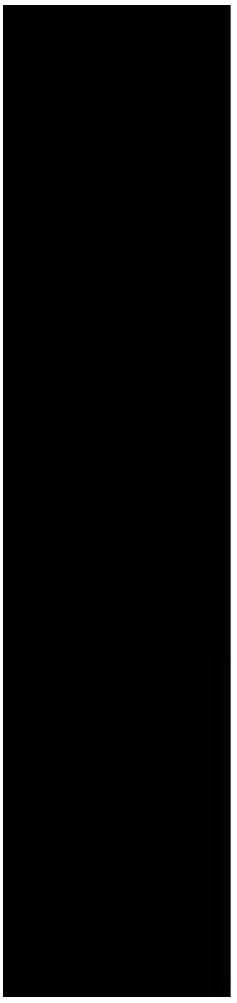

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TO THE READER.

IT is requested, that this paper, may be returne
of Agriculture, at its Office in London, with any additiona
observations, which may occur on the perusal, written on t
soon as may be convenient.

It is hardly necessary to add, that the Board d
itself responsible for any fact or observation contained in this
at present, is printed and circulated, for the purpose mere
farther imformation respecting the Husbandry of this c
enabling every one, to contribute his mite, to the improvemen

The Board has adopted the same plan, in regard
counties in the united kingdom; and will be happy to give ev
its power, to any person, who may be desirous of improv
cattle, sheep, &c. or of trying any useful experiment in hus

London, 1794.

GLOUCESTERSHIRE.

THE county of Gloucester, is bounded on the west by Herefordshire and Monmouthshire, on the north by Worcestershire, on the east by Warwickshire and Oxfordshire, and on the south by Wiltshire and Somersetshire. It contains, according to Bowen's map, about 800,000 acres of land.

In describing the agricultural state of the county, it will be necessary to notice separately, the districts differing in soil and management. I begin with the

COTSWOLD HILLS.

The Soil—is various; the greater part, what is here termed "stone brash," a loam intermixed with stones, on a subsoil of calcareous rubble or rock: the average depth of ploughing not much exceeding four inches: there is however some quantity of stiff sour land interspersed on these hills, many farms and one or two whole parishes are chiefly of that nature. Near Fairford and Cirencester the soil is richer and deeper; particularly about the former a deep sandy loam prevails, producing great crops in a favourable time, but apt to burn and parch up in dry seasons; at which times they likewise labour under great inconveniencies for want of water, with which the greater part of these hills is abundantly supplied.

Climate. The Cotswold hills, are milder than could be supposed, from their heighth and deficiency of shelter.

The harvest, this last season, was begun in many places, the first week in August, and pretty generally by the second. There is however a difference of from one to three weeks, in the ripening of corn, in the different parts of the district under survey, which cannot be accounted for by management, or any outward circumstances.

The Properties are mostly large, and the occupations likewise; there are however some exceptions in both; but it is the opinion of experienced men, that farms of from 200 to 500 acres, can be managed with much greater advantage to the farmer and the public, than smaller ones.

In the vallies, and where the land is of a sufficient staple for permanent meadow and pasture, it is mostly in that state. Sheep and cow downs are likewise frequently met with; but the quantity of land thus employed, bears but a small proportion, to that which is occasionally under the plough; some few parishes on the sides of the hills however, are an exception to this rule, in which perhaps half the land is meadow and pasture, worth from 20 to 30s. per acre. In these situations, dairying is mostly followed, in preference to grazing; the sort of cows chiefly Gloucestershire, frequently crossed and improved from other breeds. Most farmers dairy a little for home consumption; and though the nature of the soil, renders sheep the live stock chiefly to be attended to, yet a sufficient quantity of cattle, generally are, and always ought to be, intermixed with them to improve the pastures, and make the most of the keep; of these not so many are bred as formerly, Gloucester market weekly affording great choice from Herefordshire, Wales and Somersetshire; of these, the Glamorgan and Somerset appear most eligible as working cattle for the hills, being active in harness, and when turned off, feeding in less time than the larger breed of Herefordshire. In stall-feeding,

hay, chaff, barleymeal, oats and bran* are the articles of food chiefly used. The smaller Welch breeds of cattle where grazing is the only object, are frequently bought in in winter or early in spring, and fatted in the course of the summer, so as to go off between Michaelmas and Christmas with little or no hay, which in a country where it is so scarce and valuable, is a material object.

The native *sheep* of these hills in their unimproved state, was a small, light carcassed, polled animal, bearing in the memory of an experienced agriculturist now living, a fleece of fine wool of about 3 lb. weight, but lighter and finer before that period. They were cotted in former times, but that practice has not been in use since the remembrance of the person alluded to, from which circumstances it is very propable that the assertions of ancient authors, that the Spaniards procured their breed of fine woolled sheep from the Cotswold Hills, are founded in fact, though contradicted by some modern writers. Since that time the inclosures and better management taking place, and good rams being procured from Warwickshire and other counties, the Cotswold sheep have considerably improved in weight of carcass and quantity of wool, which, though coarser than formerly, is in very great esteem as combing wool, being of a good length and very mellow quality. The fashionable Leicestershire sheep have been occasionally introduced into this district, and, for a cross or two when chosen with judgement,

* If a mill could be invented to grind wheat, either by the wind or with a horse, cheap and durable, it would enable the farmer by mealing his own grain, to obtain a quantity of excellent food for his fatting stock, to the great enrichment of the land. The great objection to the steel mills hitherto invented, is, that the corn muſt be in the very best order, otherwise it clogs and will not grind properly. To make a machine of this sort complete and generally useful, there must probably be some ingenious contrivance annexed to dry and harden the corn if necessary.

have been found to improve the breed in shape and disposition to fatten, but where persisted in, they have greatly reduced the carcass in size, and considerably lessened the wool in quality and quantity: nor is this reduction in size recompenced by their requiring less food, or fattening quicker than the other breeds, qualities which have been so strongly insisted on, and on which the merit of the breed has been chiefly founded; on the contrary, experienced graziers in this district who have paid particular attention to them, are convinced, that they require full as much time and room as the larger native breed. I say nothing of the comparative value of the carcasses to the butcher, nor of the estimation the meat of the different breeds is held in by the consumer; the most satisfactory intelligence on these heads may be obtained in Smithfield Market.

In the common practice of the district the wether sheep are fatted off from two to three years old. The average weight of carcasses, ewe 22 lb. wether 26 lb. per quarter; fleeces on an average of the whole flock run four to the tod of 28 lb. Wool sold this season from 14s. to 24s. per tod. I understood at this time it is not worth more than 18s.

Wether sheep, by keeping them another year, are frequently brought to weigh from 40 to 50lb. the quarter.

Probably no part of the kingdom has been more improved within the last forty years, than the Cotswold Hills. The first inclosures are about that standing; but the greater part are of a later date. Three parishes are now inclosing; and out of about thirteen, which still remain in the common field state, two I understand are taking the requisite measures for an inclosure; the advantages are great, rent more than doubled, the produce of every kind proportionably increased. In the open field state, a crop and fallow was the usual course. What is here called the "seven-field husbandry" now generally obtains; that is, about a seventh

a seventh part sainfoin, and the remainder under the following routine; turnips, barley, seeds two years, wheat, oats. A part of the wheat stubble is sometimes sowed with peas, but generally more with a view to home consumption than for sale, that crop being very precarious, if often repeated. Vetches are likewise frequently, though not so often as they should be, substituted for the oat crop, to be eaten on the land with sheep, or mowed for horses and other stock. The management of the crops requires to be more particularly described.

Sainfoin.—This district stands one of the first in the cultivation of this excellent grass; the usual management has been to sow it with barley, after turnips, three bushels per acre, to which is generally added about five pounds of trefoil, which generally improves the first year's produce, and by occupying the soil, prevents the weeds from getting a-head till the sainfoin has established its roots. There are some very superior managers, however, who having been induced from an accidental occurrence to think a different procedure would be more advantageous, tried it with so much success, that they have constantly adhered to it since. The method alluded to, is to sow it on land exhausted by repeated cropping and full of couch grass, the sainfoin rooting so deep, does not draw its nourishment like corn, from the surface soil, and therefore is not injured by its impoverished state, whilst its greatest enemy, the black bent, is effectually kept under by the couch grass. In this practice it is likewise sown with barley, and very thin, not more than a bushel per acre, it having been noticed by the same attentive observers, that, when sown thin, the roots are larger and more vigorous, and in two or three years get full possession of the land, producing greater crops, and lasting longer than the thicker planted. There are other practitioners who object to thin sowing, observing that the hay being chiefly wanted for

sheep, although it may produce as much or more in quantity, the stems are much larger and not so palatable to that animal, occasioning great waste in the consumption. It must likewise be observed, that the method of sowing it on foul exhausted land, having been tried in the neighbourhood of Gusting, on a less genial soil, has in two instances that have come to my knowledge, failed; it might therefore be advisable, when the culture is new, to make small experiments first. In the neighbourhood of Stowe, I am informed, a fourth part of the land is appropriated to this grass; but as it requires a great many years to intervene before land that has once borne it, can be cropped with success, that probably may be found too large a proportion. The duration of sainfoin depends a great deal on the management; mowing it before its full blossom is detrimental, the roots bleeding very much and mildewing; for the same reason seeding of it is accounted beneficial; if wished to last, it should never be fed but in the months of October and November, and then only with cattle, sheep biting too close; the lattermath is, however, excellent food for weaned lambs, and therefore often applied to that purpose. Indeed the farmers in general do not wish it to last longer than seven years; the land being in that time thoroughly rested and fit for corn, whilst other land under the plough wants rest; but if desired, it might, with proper management, last ten or twelve years. The hay, if well made, is, in the fore part of the season, equal to any meadow hay in the district for most purposes. When worn out, so as not to be worth mowing, it is generally pastured a year or two, which thickens the turf, and of course produces more and better ashes, when pared and burnt, in which method it is always broken up.

Turnips—in the usual practice, succeed oats; the stubble is ploughed in autumn or the beginning of winter, in which state it lies till spring seed-time is finished, when,

ell dragged, it receives two or more ploughings, if
ry, with sufficient dragging and harrowing between,
wing as much time as possible between each ope-
for the seeds of weeds to vegetate and be destroyed.
ng of the farm yard is chiefly applied to this crop.
re sown from the latter end of May to the beginning
ust, and once or twice hoed, according to cir-
nces. They are eaten off with sheep; always be-
at the lower part of the ground, and working up
lenty of hay is allowed, which in this district is
ry for the health and well-doing of the animal.
s, thus expended, greatly enrich the land, and are
f use through the whole course of crops.

y—is sown after turnips, on one ploughing, as
the peas and oats are got in the ground. Grass
e either sown before the last time of the harrows,
the barley is come up, and before rolling it; in
case it is usually covered in with a bush hurdle:
y of seed three bushels; average produce twenty-
shels per acre.

s seeds—chiefly sown, are from two to six pecks
ss, and from five to ten pounds trefoil; likewise a
quantity of broad and white Dutch clover; but the
nd is apt to tire of the broad clover, if often sown
ntity; and the white Dutch is getting out of repute
ep feed. In the common practice the seeds are
for hay the first year, and grazed the following sum-
hen the land is ploughed up for wheat.
ry valuable sort of *ray grass*, which has been cul-
for twenty years past, by Mr. Peacey, of North
deserves particular mention. Perhaps there is no
xisting more valuable to the stock farmer than this,
erly managed; it is very early, and affords a great
of excellent keep before any other pastures will
carry

carry stocks: a ground of it, hired the preceding Michaelmas, kept eight ewes with their lambs per acre for one month last spring, before any other pasture was ready for them. It is very nourishing, and grateful to all kinds of stock; as may be seen where they have a choice of that and other pastures to run in, the natural pastures will be quite neglected, whilst the ray grass will be pared close to the ground: indeed it requires to be hard stocked; for if suffered to get a-head, it is neither so palatable, nor nourishing; it is equally excellent for hay, if cut just as the ear appears, and before it is fully formed; in the autumn, it likewise affords a great deal of keep. It rather improves with age, and has been found particularly advantageous, in laying land down to permanent pasture. It has not been a general practice, with the farmers on these hills, to raise their ray grass seed; the deficiency of natural pastures, and the large flocks of sheep kept, making the lays valuable, both for hay and pasture; this has occasioned rather a scarcity of seed of late years, and been the means of introducing very inferior sorts from other countries, of which some have proved strictly annual, producing a tolerable crop the first year, but dying away the following winter; whilst that of longer duration has been found very unproductive, particularly, all the latter part of the season. The great loss and injury sustained by these failures, has made the farmers more attentive in their choice of seed, and greatly advanced the price of that which can be relied on; so that Mr. Peacey seeded an unusual quantity last year, to answer the demand which he foresaw he should have for it; it is already engaged at the advanced price of half a guinea per bushel, which price was fixed on it by some gentlemen who had experienced its value, and thought it would not only properly reward the attention which had preserved so valuable a grass, but be the means of making it more generally known, and encouraging the culture of it, to the exclusion

of all the inferior sorts. Mr. Peacey has likewise cultivated the orchis grass, a broad-leaved grass, that springs directly after the scythe, in mowing grounds; he finds this very useful on barren land, that will bear no other grass. A bank of this description, adjoining his downs, is covered with the orchis grass, and from the stock lying on it, and paring it down, it seems very palatable to them.

Wheat.—The method of sowing this grain in the district under notice, is rather singular. The land is ploughed from two to six weeks before sowing, as circumstances permit; if it gets quite grassy, it is thought better. The first rain that falls in August in sufficient quantity to thoroughly soak the land, begins the seed time; from thence to the middle of September is thought the best time, The seed is dragged in with heavy drags, working the land till the furrows are well broke, but rather wishing to leave it rough than otherwise; if frequent showers fall during the dragging in, so as just to allow the drags to work, it is thought better by most people. Experienced men say, that our land being naturally too light for wheat, is by these means, rendered more suitable to it, at the same time that weeds are very much checked, which is a very material object, where the corn is so long on the ground. I have seen adjoining lands, the previous management of which had been exactly similar, the one part sown wet, produced a very good crop for the country, and quite clean; the other, sown dry, was not half so good, and devoured with filth. This method is practised on the dry sound loams, of which the district chiefly consists; on the heavier soils, attention is paid to the state in which they work best: the stiff sour land is frequently fallowed and dunged for wheat, over which broad clover is often harrowed in; in spring, after lying one or two years, it is broke up for wheat, followed by oats; or sometimes oats are sown on the lay, according to the state of the land. Turnips are sometimes

times sown on this sort of land, but, perhaps, had better be omitted; the poaching, in eating off, possibly doing more injury, than the teeth of the sheep recompences, rendering it unfit for any crop but oats, and probably injuring them. Wheat, clover, and oats, seem to be the crops best adapted to these soils. Cabbages are not known here, in field culture, and probably these kinds of soils would require more dung, than the situation could command to cultivate that plant to any advantage. It may be right to notice, in this place, an error of Marshall's, in his Rural Economy of Gloucestershire, vol. 2, page 33. He represents the Cotswold farmers as "wishing to plough for every crop, when the soil is wet, and working even their fallows, when they are moist." This mistake originated, no doubt, from the account given him of the wheat process, as just related. The fact is, the farmers here are as desirous of working their fallows in dry weather, and find the same good consequences resulting from it, as in other districts. Attention is likewise paid to sowing the barley in dry weather. The old adage respecting pease, "if you sow in a flood, they will come up in a wood," seems verified on this soil; as for oats, their hardiness requires no particular nicety. Such an error is very excusable in an account which is only given as an excursion. Mr. Marshall's account of this county contains much valuable information, and has greatly shortened mine.

Oats.—The wheat stubble is mowed, if worth it, or otherwise harrowed, when it becomes brittle enough to break off, and casted to the fold-yard; and the land ploughed as soon as leisure and the weather will permit, for Oats, which are harrowed in as soon as the land will work, in February, about four bushels per acre, average produce 24 bushels.

are sown as early as possible in spring, the sort
in use is the early Burbage; they are generally
d in under furrow, about five bushels per acre,
produce twenty-four bushels.

r Vetches are, in the practice of a few individuals,
quantity to eat off with store sheep; they are
sown after wheat, as soon after harveſt as oppor-
llows. The sheep are put on them the latter end
, or beginning of June. They are commonly
off in the same manner as turnips; but if a bulky
e better way is to give them through rack hurdles,
re made the same as the common five railed ones,
ving the middle rail out, and nailing spars across at
distances, to admit the sheep to put their heads
. A swarth of vetches being mown across the lands,
ent number of these hurdles, allowing one to five
re set close to it; at noon the shepherd mows ano-
rth, and throws it to the hurdles, and the same at
next morning, a swarth being first mowed, the
are again set; thus moving them once in twenty-
rs; by this trifling additional trouble, the vetches
n eaten off, and the land equally benefitted. As fast
lands are cleared, they are ploughed, and sown
rnips, in which way good crops are often obtained
seasons, on land cleared in tolerable time, but it
be depended on for the main crop. When a suc-
is wanted, spring vetches are sometimes sowed;
he time they are sown, labour is more valuable,
des, they are not so much to be depended on.

res are chiefly those of the fold-yard. The wheat
are frequently mown or raked for litter, and
ept in sufficient quantity to eat the straw, but this
lways the case; large heaps of straw are seen in
rts of the district, rotting at the barn doors, for

want of cattle to eat and tread it into dung, and this generally for want of a sufficiency of pasture to support the stock in summer; but surely, the keeping more land down to grass, or raising some sort of vegetable food for such stock, would be ultimately attended with increase of produce and profit to the farmer, and advantage to the public. The formation of the fold yards, so as to prevent the rain water from washing the dung heaps, as well as preserving the liquid part of manure, is not at all attended to, though so much deserving of attention; on the contrary, from the sloping situations of many of the fold-yards, it might be imagined, that the prime object in laying them out, was to diminish the value of the dung heaps as much as possible. Ashes from burnt turf, or grassy stubbles, are very beneficial, and such land is usually broken up in that way. Lime is too expensive for manure; nor from two or three experiments that have come under my observation, does it seem worth attention, if that was not the case. Soot has been tried on sainfoin to great advantage, but it is not to be procured in sufficient quantity for any considerable practice. Marl has been formerly used in different parts of the district; a pit has been opened of late years in the neighbourhood of Northleach, to the great improvement of some adjoining grass grounds. Folding sheep is very little practised or approved of. The observations in the Annals of Agriculture on that practice, are well deserving of attention.

Watering meadows, has long been practised in this district; there is, probably, no considerable quantity of land capable of that improvement, without interfering with the mills, where it is not done.

Implements of husbandry—The waggon of this district is described by Mr. Marshall, and by him allowed to be the best in the kingdom for husbandry uses. The testimony of Mr. Drake, given to the Worcestershire surveyor, tends

firm that idea. The carts are very good for hauling
ng, but not so well calculated for road work and
ses. The ploughs are long in the beam, with one
they are rather improved in their construction of
Four horses or four or five oxen the most usual
t; in spring seed time and stirring fallows, generally
It is most probable ploughs might be invented to
work as well with less strength; but the land in
being a tenacious loam, full of stones, is more
e to the cattle, and requires more strength than
seem necessary on a superficial view.

es and Oxen are both used, the latter in harness, and
ground, but not so much as they ought. One team
es is necessary for carrying out corn, on our rough
lly roads, but where more than one team is kept,
ertainly are in every respect the most eligible.
the farms are large or not handy to the homestall, a
house, fixed on a sledge, is used to hold the ox
s, which being drawn to the ground where the
are pastured, and as convenient as can be to their
saves a great deal of time and unnecessary tra-
. The same cabbins, if made with sparred bot-
nd lids to open on each side, are very useful oc-
lly to keep fattening calves in.

n Houses and Offices in the old inclosures, are fre-
unhandy and inadequate to the farms annexed to
which, doubtless, arises from the improvements in
dry since their building. In the new inclosures,
e generally speaking very conveniently situated, with
nt shed room for cattle and implements. In the
n improved method of inclosing, it is thought best
de the arable part of the farm into seven inclosures
l size, being the number required for the most ap-

proved course of crops, allowing two or three smaller patches near home for odd purposes.

The Fences are usually dry stone walls, good quarries of which are generally very handy. Quick hedges are sometimes planted, but the attention and time required to raise them is a great objection. In one or two instances they have been planted within side the walls with great success—it is a pity the practice is not more general.

Population is supposed to have increased on these hills of late years, and it is generally believed that inclosures by finding more employment, tends very much to promote at least, useful population. The small pox frequently makes great ravages in the country—it is a pity a general inoculation did not take place every five or six years, which would be a great saving in expence to the different parishes, as well as the preserving many useful lives.

Prices of Labour are considerably increased; from 12d. to 14d. a day in winter; 18d. to 20d. haymaking; harvest 2s; beer or an allowance in malt in some places, is gaining ground, and as much as possible, is done by the great. Women from 6d. to 8d. and 9d. in haymaking; in harvest 12d. Hours of work from six to six, when day-light permits; late hours in haymaking, and harvest generally recompenced with beer, &c.

The Value of Draining has been long understood and practised in this district, old drains of wood and stone being frequently met with in making new ones. A great deal has been done of late years; there is still much to do; but some of the stiff sour land that most wants it, is of so retentive a nature, that the drains will not draw to the least distance. Probably Mr. Elkington's method, as mentioned in the Annals of Agriculture, Vol. 16, page

night be beneficial. The chief material is stone, ethods of doing it varies, but have nothing new those described in different parts of the Annals. ly digging the trenches sufficiently deep and filling tone, where it is handy, will be found the most and lasting method. In doing this the largest stone be put in first, and the surface levelled with smaller sprinkling a little straw on the top, to prevent the mould from getting between; or for want of that, assy sides of the sods turned down will answer the urpose.

ing and Burning is very much practised and ap- ; old sainfoin lays and all turf of a sufficient tex- e usually broke up in that way. Turnips are often t crop; and from the freshness of the land, and od effects of the ashes, a large crop is generally ed. But as the time is too short to get the land in tilth for the succeeding crops of barley, seeds, &c. hought a better method to sow wheat first, on one ing; after which, the ashes being still fresh in the , a crop of turnips may be as safely relied on, and s plenty of time to get the land in compleat tilth. wheat stubbles, that will produce a tolerable quan- ashes, are frequently pared and burnt for turnips reat success. In short whenever followed with the and clover husbandry, its good effects are indis- ; but like every other practice, it is liable to abuse hands of designing men, who have sometimes use of it to force repeated crops of corn, 'till the s been compleatly worn out and rendered incapable useful production*.

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n Ampney and its neighbourhood, the part of this county that borders ire, is the only place in which I have met with any objections to this t; the soil here consists of stiff clays and gravels; on the clays they k it answers, but approve of it on the gravels.

Carrots

Coppices are very much wanted in this district. Ash thrives remarkably well on this soil, and is very useful for hurdles and gates, as well as for fuel, which is a very scarce article; the coppices we have are chiefly composed of this wood, which is fetched from a great distance for coopers, and other uses; and has greatly risen in price, as well as got scarcer of late years, so as to cause serious apprehensions in some parts of the district, of great inconveniencies for want of a sufficient supply of this useful article. It is a great pity that every estate had not a sufficient quantity planted to supply the tenantry and labourers dependant on it. Odd corners, and sour patches, of little use under the plough, might be very profitably applied to this purpose; in boggy ground, too wet for the ash, the alder thrives well, and is very useful for gates, hurdles, and other common purposes. It has been found, that ash will not grow on the tops of the hills, though it thrives very well on the slopes; but there are a great many such situations in this district, which if planted with Scotch firs, beach, or any hardy trees that would grow, would add much to the beauty of the country, as well as greatly improve the soil and climate of the adjoining land, by the shelter they afforded. The chief woodlands are in the parishes of Chedworth, Withington, and Dowdeswell, smaller patches in Guiting and one or two neighbouring parishes; these are looked on as the natural production of the soil, protected and encouraged of late years. They are cut at about 18 years growth, and produce from 30*l.* to 60*l.* per acre. There are some coppices consisting chiefly of ash, in the parishes of Wick and Slaughter, that have been planted in modern times; they are first cut at 10 years growth, afterwards generally at about 18 years growth, and produce from 25*l.* to 60*l.* per acre. Great attention is here paid to keeping them clean, by hoeing for two or three years after cutting, 'till the young shoots

are sufficiently strong to smother the weeds. Alder
es are cut at 12 years growth, and are worth from
o 25£. per acre.

ds, both public and parochial, are very much im-
l of late years.

ufactures—The woollen manufactories supply spin-
ork to the poor women, in many parts of the dis-
but the earnings are very low. Some quantity of
spun linen is likewise brought to Stowe and other
for common uses.

es—I know of nothing commendable in the leases
district; a good plain form, equally protecting the
t of landlord and tenant, is much wanting, if pos-
o be drawn. At present they are chiefly in pro-
al hands, who either content themselves with anti-
copies, or, in order to guard against trifling incon-
ies, cramp the industrious tenant, so as often to
t improvements to the advantage of himself, his
d, and the community; whilst, at the same time,
o not prevent the knave and sloven from running
e contrary extreme.

s already been noticed, that this district has been
improved of late years; it is still improving, nor
spirit of that sort wanting; but it might be greatly
by the removal of some of the burthens, that the
g world in general labour under. Among these,
ment of tythes in kind deserve to be mentioned.
new inclosures, this load has been got rid of by
up a part of the property in lieu of it. One-fifth
arable, and one-ninth of the pasture, and in some
es, two-ninths of one, and one-eighth of the other,
asked, and agreed to. As the impropriator is
ed from all expences, except inside fences, the

part that he takes is more than equal to a fourth of the arable land, even when one-fifth is allowed; but even then the improvements being entirely the proprietors, they have been obliged to acquiesce. The acts of Parliament allow the rectors only to lease for the first twenty-one years, and afterwards the tenants remain tenants at will; in consequence of which, all the lands set apart for the clergy, become, in a great measure, unproductive; as the tenants take from them all they can raise, and set every improvement aside; and therefore they are so far neither beneficial to the clergy, or the nation. But were commissioners appointed to value the tythes of the parishes, and also the landed estates of the clergy, and were they obliged, under that valuation, to grant leases, at the rent then set on them, their estates would be improved, in proportion as other lands; and the tythes being secured to the occupiers, for a term, not exceeding twenty-one years, they could have no objection to the advance to be made on them at the expiration of that term, and the difficulties now existing, would be done away, in so far as respects the occupiers and the nation. The rent to be paid for the land, would be of no consequence in what proportion it was paid; as the only security requisite to the occupiers, is that on laying out their capital they may have from the impropriator an equal term with that they have from their landlords, and to put both on an equal footing. As the law now stands, the burden may be immoderate, and therefore to every person acquainted with the value of money (which the farmers are now, more than formerly) and know how to make calculations, it cannot be expected that they will lay out any considerable sum, when the first 11 per cent. profit, goes to the impropriator, before they can receive any advantage themselves: and, in case of a loss, that loss is augmented by the impropriators taking a tenth part of the capital laid out, as far as it was returned to the occupiers.

or Rates are every where increasing. The adminis- n of the poor laws, not only takes a large sum yearly, the agriculturist, but, in its effects, greatly injures by encouraging idleness and profligacy, among the uring poor. The liberal orders for relief, which an l tale, and an appearance of poverty and wretched- most generally occasioned by sloth and debauchery, too often obtained, has held out a means of support pendent of manual labour and exertion, and quite oyed that laudable pride, which, a few years ago was to be observed among the labouring poor, of keeping nselves independent of their parishes; on the contrary, most trifling accidents now bring them to the over- , and from thence to the magistrates, for relief. Real y, justice, and humanity, require that parish relief ld be administered in such a sparing manner, as to vince those liable to be beholden to it, that they must to their own exertions and industry alone for a com- able subsistence. If an alteration in the poor laws, ch is much to be wished for, does not take place, let recommended to all large parishes, to establish work- ses for their paupers, and let small parishes be encou- d to join in doing the same, and suffer no relief to be nted out of them. The good effects of which has been nd in many instances in this county, and shortly corro- ate what has been advanced above, that profligacy and ness, more than real want, has brought the poor's tax uch an enormous height.

le-Houses are a very great nuisance to the farmer, the public; they hold out too great a temptation to the ourer to waste that money in debauchery, which ought ind bread for his family, and greatly assist the idle and cked servant in corrupting his fellows and making them bad as himself. The magistrates of this county, have dably exerted themselves in suppressing houses of this

description; there are still too many. Those only ought to be suffered, that are absolutely necessary for the accommodation of travellers.

Chandlers Shops are nearly as great a nuisance in country places, as ale-houses. They retail, in small quantities and at extravagant rates, the worst of commodities; and draw that money out of the pockets of the poor for tea, sugar, butter, and other unnecessary articles, which, if taken to a proper market, and well laid out, would support themselves and families in health and comfort. If a plan could be devised to furnish the poor in their respective parishes with necessary articles, good in quality, and at the lowest market price, I know of nothing that would so effectually relieve them. Here are some neighbouring instances of a saving of 18d. or 2s. a week, for a family of five or six people, in the article of bread only, by their being supplied with flour at the best hand.

Dogs are now so generally kept by working men, as to become a great nuisance; they worry, injure, and sometimes kill the farmer's sheep; and, it is generally allowed, are, from their bad keep, most liable to madness; besides, that there can be no other inducement to the poor man for keeping them, but for the purposes of poaching; which is not only contrary to law, but leads to idle and vicious habits, and generally ends in worse crimes. A tax on dogs might not only prevent this, but likewise reduce the number of useless ones kept by people in a higher station.

THE STROUDWATER HILLS.

The soil on the hills is chiefly light loam; not so tenacious as the Cotswolds, nor so productive; there is likewise some quantity of sour wet land; the climate is nearly similar to the Cotswolds; the properties are various as are

e of the farms. On the hills, strictly speaking, it osed, nine-tenths of the land is arable. The ap- course of crops, the same as before, noted of the olds. On the vallies there are large tracts of good w land, which is applied both to grazing and the but mostly, the latter. There is some quantity of atered, and a great deal more is capable of that im- nent: but the mills interfere greatly; for the dairies ttle are chiefly bred, and are in general good; in g, the stock is more generally bought in, and are ous breeds, according to their application, the opi- f the grazier, and the goodness of the land.

, on the hills, are the chief stock; these are mostly horned Wiltshire bred, the fleeces average nine to l of 28 lbs. worth this year 26s. 6d. per tod. Ave- eight, when fat, wether 24 lbs. ewe 22 lbs. per r. This breed is liable to a disorder called the s, which sometimes occasions very heavy losses. nly method of prevention is, entirely changing the nce in eight or ten years. One practitioner, Mr. rd, of Baverstone, has been induced, from this stance, to try the Cotswold breed, and having, for r four years past, used rams of that breed, he will on entirely get rid of the Wiltshire blood; and, I am d to think, will find a great advantage in so doing.

Rotation of Crops, it has been observed, is similar on the Cotswolds. I saw here an application of , quite new to me. Mr. Hayward gives them in y to his farm horses, which he finds keeps them ealthy, and induces them to eat the barn chaff, and ry meat, with a better appetite;—they were, when them, in very good condition, though, I was in- , they had had no corn for half a year past, and constantly worked. The Cotswold farmer can sel-

dom procure turnips in sufficient quantity for such an application, nor would he chuse to deprive his land of the benefit derived from their being eat on it by sheep, except the crop was very heavy, in which case, perhaps, they might be advantageously thinned a little, for this purpose, or for fattening cattle in stalls. This gentleman, and his neighbour, Mr. Tugwell, cultivate the turnip-rooted cabbage. Mr. Tugwell's crop is very fine; they are transplanted on to ridges, formed by a *bout* of a double mould-board plough, of his own invention; he finds they will not flourish with him, without transplanting. This crop comes to perfection, when the turnips are all spent, and supports a great stock, just in the scarce time of spring, which makes it particularly valuable. Mr. Tugwell has likewise cultivated the Roota baga, which he does not at present approve of, but means to give it farther trial.

This gentleman is the inventor of the two-horse plough, which has been honourably noticed in the Transactions of the Bath Society, and which I understand he is now requested by them to draw up a particular account of. I saw several of them at work in a ground of Mr. Hayward's; they seemed to go very easy to the horses, and made very good work. Mr. D. Hayward informed me that in a trial of ploughing among some neighbours, they ploughed an acre of clover ley, with one of these ploughs, and a single horse in six hours. These ploughs have been tried on the Cotswold Hills; but the persons who tried them never entertained an idea, that the horses could go in them for eight or nine hours, without baiting, as is practised here; and the introduction of the Norfolk custom of baiting at noon and working later in the evening, though by no means a bad one, yet being new to the country, was attended with so many difficulties as to discourage the use of them.

uble mould-board Plough is very clever, and seems
ulated for the purposes it is designed for. Mr.
uses it to make the water furrows on his land.
nner of doing this on sidelong grounds, is well
g attention. Instead of furrowing down the slopes
ual way, he draws his furrows across, but inclin-
iently with the declivity for the water to draw off,
n means every part of the ground is thoroughly
ally drained; and the bottoms of some of his
which, in the common method, were poisoned
from the upper part, being now laid quite dry,
me the most productive parts of the fields.
gentleman is likewise constructing a roller, which
to be a very useful implement.
two rollers in this neighbourhood, on a con-
new to me; one of them was procured from the
rhood of Marlborough—a common roller, of
rteen inches diameter, is surrounded with wheels
hes distant from each other, and three feet in di-
the spokes being let into the roll. The other is
ovement from this; a smaller roll is the axis, on
e put solid wheels, about three feet in diameter,
-half inch thick; made alternately of wood and
: the wooden ones are made to fix at any distance;
two of these an iron one is put one-half inch less
ter, and with room sufficient to play up and down,
give way to any obstacle, and to press down into
ows; it likewise, by these means, is rendered less
choak up in rough land. For breaking clods, or
land, where great pressure is wanting, these ap-
be very effective implements.
e appears to be a great deficiency of shed room
district. Implements of husbandry of all sorts,
er left in the grounds, where last used, or at best,
ly the shelter of a tree to preserve them; nor are
much better accommodated for wintering cattle.

This

This is a very material object; the injury sustained by having the implements thus exposed, is, perhaps, more than equal to the fair wear of them, and would well pay for the construction of sheds for their preservation. In regard to live stock, it is still worse; cattle fed on straw, in exposed and unsheltered situations, are sure to sink considerably; and are liable, when spring comes on, to the yellows, and other complaints, which greatly injure, and sometimes prove fatal to them. Dairy cows, in the open fields, down in the vale, are known to sink very much, in bad winters, though foddered with good hay. On the contrary, where good yards are constructed, with plenty of shed room, and attention is paid to littering them down occasionally, and keeping the cattle dry and comfortable, they sometimes even improve on the straw, and are sure to come out healthy and thriving in spring.

The land is chiefly in an inclosed state; but in some instances, additional partitions are wanting; the fields being too large for the proportion of the farm for any particular crop, which is attended with great inconveniencies; some open fields remain, but are fast disappearing. Inclosures have been uniformly attended with great advance of rent, and increased produce.

Population increasing. Wages and price of labour on the advance.

Draining Land, chiefly done with stone, but not sufficiently attended to.

Paring and Burning practised, and with the turnip and clover system, very much approved.

Woodlands, chiefly beech, very much decreasing and doubled in price within these twenty years. Large additional plantations are very much to be wished for, not

only for future supply, but from a conviction founded on experience, that bleak situations, are very much improved by the shelter they afford.

Roads in general, good and improving.

The Woollen Manufactory is carried on to great extent in this district; the fine trade is at present at a stand, but the coarse for army cloathing and the East-India company remarkably brisk. The introduction of machinery, for every process the wool goes through to the loom, has thrown many hands out of employ; and several gentlemen, I have consulted, attribute the enormous rise of poors rates entirely to that cause; these, I have been credibly informed, amount, in some instances, in the immediate vicinity of the manufactories, to six shillings in the pound and upwards yearly. But I am inclined to ascribe this heavy burthen on the landed interest, more to the vicious and profligate habits of the weavers, who can, if good hands, earn a guinea and a half a week; which, supposing the carding and spinning machines to have deprived the women and children entirely of employment, is certainly sufficient, properly laid out, to maintain their families comfortably. But the misfortune is, these earnings very seldom find their way home, but are wasted in a public house, whilst the families are cloathed and fed at the expence of the parish, and the men themselves, notwithstanding their great earnings, are ragged and miserable in appearance; and in the event of a week's illness, or a temporary suspension of the particular branch of the manufactory they are bred to, are reduced to the greatest distress. This evil is not peculiar to the clothing manufactory, but is common to all I have had any acquaintance with; it is a complicated evil, and, if capable of any remedy, requires a much abler pen than mine to point out the means.

VALE OF BERKELEY.

For the account of this part of the county, I must beg leave to refer to Mr. Marshall, his very respectable sources of information, and the pains he has taken in describing every thing worthy of notice in the district, has put it out of my power to make any useful additions. For the same reason I leave in his hands the dairy management of the county; his account of the process in manufacturing cheese and butter, is, to the best of my knowledge, perfectly accurate and just. To his account of making butter, and to Mrs. Chevalier's letter, Annals Agri. Vol. 5, page 509, and other similar communications in that valuable publication, I would beg leave to refer, for methods infinitely preferable to the mode of churning the whole of the milk together, mentioned in some of the reports already in circulation. Cleanliness in every particular, however, is one of the chief requisites, in making sweet and good butter.

THE VALE FOR A FEW MILES ROUND GLOUCESTER.

Soil, deep and rich, varying from light sandy loams to the stiffest clays. In climate, not so forward as might be expected from the situation, owing, no doubt, to the inconveniencies the agriculture of the district at present labours under, which will be noticed in their proper places.

A vast deal of land in this district is the property of the church. The whole parish of Bamwood, a great part of Wooton and Cranham, and nearly all Tuffley, with many estates in every parish in and near the city, belong to the dean and chapter of Gloucester; the parish of

of Maisemore to the bishop of Gloucester; and several estates to colleges at Oxford. The church has likewise the tithes of several parishes. The property belonging to the colleges is now mostly sold out on lease for twenty-one years, renewable every seven. The bishop's land is in general sold out for three lives; when one drops, putting a fresh one in as the parties can agree.

The Properties, with some few exceptions, are small. The occupations are from £50. to £100. a year; some few larger.

The Meadow and Pasture Land is in general very good, and is employed both in dairying and grazing; but mostly the former. The cows, the old Gloucestershire breed, mostly reared, and very good. Oxen are chiefly of the Herefordshire and forest of Dean breeds. They are fed on grass, hay, corn, either whole, or ground, and oil cake; the latter, from its extravagant price, getting out of use of late years, being advanced from four or five, to six and seven pounds per ton.

There is very little land capable of irrigation in this district, the brooks being extremely shallow in summer. Large tracts of rich grass land on the banks of the rivers Severn and Leddon, are liable to be overflowed by the freshes, and tides, to which they owe their extraordinary fertility. A canal from Gloucester to Hereford is now cutting across these meadows, which shews, they were, in former times low, sour, unproductive marshes; the soil to the depth of ten feet or upwards, being composed of the rich particles deposited by the floods in the course of ages. An entire wall, and several other proofs of their original state, have been dug out, in the course of this work. These meadows might at a moderate expence, by the construction of proper banks, and flood gates, be defended from mischievous floods, which sometimes

destroy the grass and hay nearly made, and receive the full benefit of those that came at seasonable times. This has, in one or two instances, where they are private property, been in some degree effected; but being, generally speaking, subject to common rights, no improvement of this kind is thought of. The following account of this description of property, in the vicinity of Gloucester, I had from very good authority.

The Town Ham, about 50 acres, common all the year round to the freemen of Gloucester for horses and cattle, and to the butchers for sheep. The butchers, old records say, have this privilege on condition of their giving the sheeps heads and plucks to the poor; but this part of the bargain is forgotten.

The Oxleaze, about 40 acres, the property of the mayor and burgesses to the 5th July; after that, common to the freemen without stint.

Portham, about 90 acres, private property to July 18th; after that, common as the Oxleaze.

The little Meadow, 60 acres, the property of the dean and chapter to July 18th; after that, common to the freemen for 3 horses or cattle each.

Meanham, 60 acres, private property to July 18th; after that, common like the little meadow.

Wallham, about 200 acres, a lot meadow, when the hay is cleared, common, without stint, to those who occupy a tenement in the neighbouring hamlets. In this meadow the lord of the manor has the privilege of turning two colts whilst the crop is growing. Mr. Marshall exclaims against this "diabolical privilege," as he

calls it; but it ought, in justice to the present owner of the privilege, to be mentioned, that he offered some years ago to relinquish it on equitable terms, but the offer was refused.

Sud Meadow, about 160 acres. The land belongs to several proprietors, but a great part of it to the Duke of Norfolk. The duke has an exclusive right of common for sheep to the beginning of May; it is then trained up for mowing, and the hay being cleared, the occupiers have a right to put in two cows for each acre, and the duke horses and sheep without stint.

There is a great deal of this species of property between Gloucester and Tewkesbury, and likewise on the banks of the Severn and Avon, in the neighbourhood of that town.

ARABLE MANAGEMENT.

On the every year's land, the usual course of crops is barley, beans, wheat; or barley, clover, wheat; the clover latterly much increased, and found to answer very well.

Some of the stiffest clays are fallowed every third year, viz. fallow, wheat, beans. A great deal is fallowed every fourth year, fallow, barley, beans, wheat, which seems to be a much preferable course. On the light soils, "frouse," or peas and beans mixed, are frequently sown, and produce greater crops than either single, being a mutual support and shelter to each other.

Manures, are town dung, and that made by stall-feeding cattle, and by wintering the store cattle in the farm yards, on the barley straw, which is the only straw usually consumed on the premises. If an advance in the price of manure, is a proof of improving husbandry, this district has that proof, very decisively. A few years ago, the

the stable dung of the largest inns might have been contracted for annually for a trifle; one of them was even threatened with an indictment, from the moisture of the accumulating dung heaps overflowing the neighbouring cellars. It is now fetched away fresh from the stable at 4*s*. or 5*s*. per waggon load.

Soaper's waste Ashes, which, in the remembrance of many, the farmers were paid for hauling away, and which could not be got rid of even in that way, are now fetched as fast as made at 2*s*. 6*d*. or 3*s*. per waggon load. These on cold, sour, grass lands, are found to be extremely beneficial.

Glue-makers Refuse, is found to be a very strong manure. On grass land it forces great crops, but cattle will not pasture on it for two or three years. It is equally efficacious on corn land; but in the instances I have known it used, it has been fresh from the yard, and without any mixture, in which cases its effects have been too forcing, running the corn up too much to straw, and causing it to lodge. If made into heaps, with yard dung and mould, and well mixed together, it would, I do not doubt, be found much more beneficial.

IMPLEMENTS.

Ploughs without wheels, long in the beam, do their work well, and perhaps, not much to be improved, at least during the present open field system. Ploughing in general done very well, and much improved of late years.

Dung Carts, mostly broad wheels, made to let up with swords.

Waggons

ns with six and nine-inch wheels, frequent, to
g; no others admitted toll-free through one of
ikes. The waggons in general not so lithesome
hills.

mostly used, three to five to a plough, according
ork. Some oxen, and coming more into use,
a very desirable circumstance.

SEED PROCESS.

is sown from the end of October to Christmas,
November. If on clover, the clover is "brushed,"
light, some time before. The seed earth is given
ely before sowing, from five to eight inches deep.
l is trampled by leading horses over it before
to close it, otherwise the plant is apt to perish:
if sown on a stale furrow it might be better, but
rely practised. If sown after beans, the stubble,
to ploughing, is rolled, harrowed, and collected
and burnt. After the seed is harrowed in, the
are opened by the plough, shovelled out, and the
nded. It is generally rolled in spring, and twice
The wheat stubble being left long is immediately
and used for thatching ricks, barns, &c. the
ng sold at a great price to Gloucester. The land
d as soon as possible; it is again ploughed deeper
ning of winter, and once or twice more in spring,
asional dragging and harrowing for

which is generally sown in April, and is the
st usually dunged for, if any. Broad clover is
sort sown, about 10 or 12 lbs. per acre; mowed
g horses, and for hay; second crop mowed for
eeded.

Beans.

Beans.—The land being previously ploughed, is harrowed as the weather permits, from the middle of February to the beginning of March; beans, or pouse are planted by hand across the ridges; they are twice hoed, and, if clean beans, usually reaped.

Quantity of seed sown and average produce.

	seed sown.		average produce.
Wheat,	2 bushels	-	20 bushels per acre.
Barley,	3 bushels	-	25 bushels.
Beans,	3 bushels	-	24 bushels.
Pouse,	3 bushels	-	30 bushels.

Customary bushel 9½ gallons.

The above account is of the best management in the district, in which management, I have known the bean stubbles lightly skimmed and cleaned previous to the seed ploughing for wheat; and the wheat stubbles, if foul with couch grass from awkward seasons, summer fallowed for barley. I do not think Mr. Marshall's account of the bad management and foulness of the land at all exaggerated, in many instances some years back; but, am happy to learn, that the slovenly managers are fast disappearing, and better practices daily getting ground. What Mr. M. says concerning sheep, does not respect the immediate vicinity of Gloucester, where they are never thought of for fallows, nor kept in any quantity to my knowledge. The few that are kept, are chiefly, and, from the soils being so subject to rot, ought always to be yeaning ewes, bought in after Michaelmas, and fatted with their lambs in the course of the following summer. The average produce as above stated, which I had from very respectable authority, seems very small on such rich land, but may perhaps be accounted for by the awkward

situation

of the arable part of the district, which is chiefly , and so much intermixed, that four or five acres ge quantity for any man to have in a lot. I know. e which is divided into eight lands, and spread large common field, so that a man must travel three miles to visit it all. But though this is a ble instance of minute division, yet, it takes such a degree, as very much to impede all the s of husbandry. But this is not the worst; the ooting different ways, some serve as headlands on in ploughing others; and frequently when the anager has sown his corn, and it is come up, his neighbour turns upon, and cuts up more for him, s own is worth. It likewise makes one occupier ent to another in cropping his land; and in water ng, one sloven may keep the water on, and poison ds of two or three industrious neighbours. If the interests in these fields could be reconciled, the properties laid together, and an inclosure take there is no doubt, but, from the improved state land, from its being laid dry and healthy, with the ction of a correct course of crops, more than dou- quantity of corn would be raised.

, are chiefly compounded for; arable land at 6*s.* ss land at 2*s.* 6*d.* or 3*s.* per acre; but only yearly, refore, in the event of an improved husbandry, value of the tithe would doubtless be exacted.

s, in winter 12*d.* in summer 18*d.* and beer. The month about 30*s.* and board. Much work of all one by the piece.

tting beans 18*d.* to 20*d.* per bushel.
eing ditto 7*s.* per acre, twice over.
tto wheat 5*s.* ditto, twice over.

Reaping beans 6*s.* to 7*s.* per acre.
Ditto wheat 5*s.* to 5*s.* 6*d.* ditto.
Mowing, raking, and cocking wheat stubbles 20*d.* per acre.

Draining, is not sufficiently attended to. Underground drains are hardly known, nor are they wanted in many instances; the damage proceeding more from surface water, than from springs. The trenches and ditches opened for this purpose, by good managers, are rendered inefficient by the shameful neglect of the common ditches and brooks, which not only check this first of improvements, but frequently occasion great damage by land floods, which might be prevented if they were kept in a proper state. The arable land is all in high ridges, and more attention is paid than formerly to keeping the furrows and proper trenches open to lay the lands dry; but this is not so effectual as it ought to be, for the reasons before given.

Paring and Burning is not practised.

Roads, are very bad, the materials on the spot being very soft. A great deal of stone brought from Chepstow by water, to Gloucester Quay, and sold there at 3*s.* 6*d.* per ton, and upwards, to mend the roads to the extent of four or five miles in some directions. They are however in general under very bad management. A proper attention to forming them, and to keeping the hedges low, and the drains open, would soon make a great alteration.

Farm Houses and Offices, in general very middling, except in the article ox-stalls, which where grazing is practised, are in general very convenient.

Manufactories.

Manufactories.—The only one carried on in this district is the pin manufactory, which chiefly employs the poor in Gloucester, and a great deal round the country. Spinning is likewise brought into the neighbourhood from the clothing country.

Poor's Rates in the villages round Gloucester run from 2*s.* to 2*s.* 6*d.* in the pound; rather decreasing than otherwise. In Gloucester they are very much reduced, owing to a gentleman very much interested in them, having taken upon himself the direction of the workhouse, and obliged all who wanted relief to come into it.

THE VALE OF TEWKESBURY, OR WHAT IS MORE GENERALLY CALLED THE VALE OF EVESHAM.

Soil, varies from sandy loams to clay, but mostly deep and rich. In climate, this district in general is earlier than round Gloucester.

The Properties and Farms are mostly moderate.

A large proportion of this district is arable, and mostly common field, but subject to a regular course of crops.

Here, as in the neighbourhood of Gloucester, there is a considerable quantity of lot meadow, which is common after hay-making. There are likewise in several parts of the district, summer common pastures for cattle and sheep.

The Pastures are mostly employed in dairying; chiefly the North country long horned breed, mostly reared.

Oxen for grazing chiefly bought in, of the Herefordshire and North country breeds.

Sheep.—Though the greater part of the district under notice is very subject to the rot, insomuch that it is reckoned they lose their flocks once in three years on an average, there is a considerable quantity kept, the farmers being persuaded they could not raise corn without them. The arable fields after harvest, are stocked without stint. When spring seed time commences, they are confined to the fallow quarter of the field, and stinted, in proportion to the properties; they are folded every night, and kept so hard, that scarce a blade of grass, or even a thistle escapes them; and this management is thought essentially necessary, especially on the stiff soils, to keep them in good order, such soils being too hard to plough in very dry weather, and of course, not eligible in wet. The grass and weeds, without this expedient, would often get so much a-head as not to be afterwards conquered. The fold likewise is reckoned very valuable. Wether sheep are bought in for this purpose, an ordinary hardy mixed breed.

There are some inclosed parishes in this district, such as Kemerton, Bickford, and others, consisting chiefly of good sound loams, healthy sheep land, in which breeding flocks of very good sheep are kept, mostly of the Cotswold breed. In these the following are the usual courses of crops. Turnips, barley, beans, wheat, and turnips, barley, clover, wheat. In the open fields they are confined to the following course: fallow, barley, beans, wheat; the fields being allotted out for that purpose. Clover is sown sometimes in small quantity, in lieu of beans, for soiling horses, who are tied on it by the foot, the clover being first mown, and put just within their reach, by which means they eat it up clean, and pick the land over after the scythe. Vetches are likewise sown for the same purpose, to succeed the clover; this is esteemed a very good preparation for wheat. Clover is very seldom sown

in quantity to mow for hay, it being thought to weaken and injure the land.

The fallows are folded, or dunged, and ploughed three or four times; good managers, always give the fourth ploughing, reckoning it highly beneficial, provided it be given before Michaelmas, and the land laid thoroughly dry for the winter. In riding over some of these fields, in the course of my survey, the difference in management, was very perceivable; some of the lands, were in a ſtate of garden culture, not a weed to be seen, and laid perfectly dry, whilſt others, having received three ſlovenly ploughings, and no attention paid to the water furrows, were covered with filth, and poiſoned with ſtagnant water. It is ſtrange, that with good examples before their eyes, any persons can be ſo blind to their own intereſts.

Barley is sown in March, as soon as bean setting is finiſhed.

Beans are all set by hand, as early as the weather permits in February, in rows twelve inches diſtant, used formerly to be planted lengthways of the lands, but it is now thought better to set them cross ways, being more convenient to clean, and lying better to the sun. They are twice hoed and hand weeded. Pease are not approved here, not so well admitting the hoeing and weeding as clean beans.

Wheat sowing begins towards the latter end of October, the bean ſtubbles are bruſhed soon after harvest, and again ploughed at seed time; if the ſtubbles are grassy, they are breast ploughed and burnt, in the best practice, if the weather permits. The clover and vetch lands, are generally ploughed some time before sowing; after the seed is harrowed in, the land is trod evenly and firmly by men, two treading a team's work. A superior manager, Mr. Stephens,

Stephens, of *Pamington*, rakes his wheat, as soon as the land is dry enough in spring, with common wooden rakes, raking the land two or three times in a place, so as thoroughly to stir the surface, at the expence of two shillings per acre; it is afterwards twice hoed in the common practice of the district; he finds this method very beneficial, and has generally superior crops to his neighbours, who, I do not find any of them follow his example.

Manures, are those of the fold yards and stalls, likewise stable dung, coal, and soaper's waste aſhes, from Tewkesbury.

Foot Ploughs are used, long in the beam, and do their work very well; practical farmers say, that shorter and more compact ploughs would not work in these soils, except the weather and state of the land was very favourable to them. Horses are chiefly used, four or five to a plough.

Quantity of seed and average produce.

seed sown.		average produce.
Barley,	4 bushels	- 20 bushels per acre.
Beans,	4 ditto	- 30 ditto.
Wheat,	3 ditto	- 24 ditto.

Wages and price of labour.

In winter 12*d.* to 14*d.* summer 18*d.* and beer; women 7*d.* or 8*d.* for the harvest 30*s.* and diet, or £3. and 1½ bushel of malt without.

The Parish of Kemerton was inclosed, and exempted from tithe, about the year 1772, since which time the rent

is

is very much advanced, and the produce more than doubled. Population likewise very much increased.

Draining.—The observations made on this head, in the neighbourhood of Gloucester, are equally applicable here. The wet state of the land is intirely owing to the brooks and ditches not being properly scoured and opened, to carry off the surface water. An enforced attention to this, and to the cutting new drains, if wanting, all through the vale, for this necessary purpose, would be the first and grand step towards one of the greatest improvements that can be suggested.*

Paring and Burning.—I do not find that this is practised in any part of the district, except on Oxenton Hill, in the neighbourhood of Kemerton. This is a cold thin clay soil, more adapted for pasture than corn, but occasionally broken up. Mr. John Bricknell, who is represented to me as the introducer of this practice, thinks it exceedingly beneficial. He ploughs and burns for wheat; after harvest the stubble is breast-ploughed, and left through the winter to rot; in spring, the land is ploughed and sowed with oats, and laid down with ray grass and clovers.

Wood is scarce, the hedges and lop of trees being the chief supply. Thorns are frequently suffered to grow on the meers in the common fields, which sometimes cause disputes between the occupiers of adjoining lands, and certainly occasion more loss than profit. Odd corners would be better applied to this purpose. Dutch withy

* In one of the open arable fields, I observed a considerable quantity of land, which, being too wet for the plough, lay neglected and covered with rushes and trumpery, affording only a little ordinary keep to a few cattle, but which, if properly drained, would be equal in value to any part of the field.

is sometimes planted in boggy bottoms, and by the side of brooks to great advantage.

Roads in the neighbourhood of Tewkesbury, are mostly good and improving; in some of the deep parts of the district they are but indifferent, but exertions are making for their improvement.

Farm Houses and Offices, in the open part of the district, are in general very middling. Cows are too much foddered in the grounds in winter, which in bad weather injures both cattle and grounds materially. Some few improvements on this head have lately taken place. In the inclosed part of the district, they are much more convenient.

Leases run from eight and twelve to twenty years, and without lease, the land is held for the term of four years; in which time, according to the established course of husbandry, it is all regularly cropped.

Tithes are, in a considerable part of this district, taken in kind.

THE OVER SEVERN DISTRICT.

Near Gloucester the soil, and management similar to what has been described. But the country, generally understood by this term, consists chiefly of the red land of Herefordshire, varying, from light sandy loams to stiff clays. In climate, it is considerably forwarder than the vale round Gloucester. It is supposed, considerably more than half this district, is under permanent meadow, and pasture; the larger part of this is employed in dairying, though about Newent, and some few places, grazing is chiefly followed. Watering meadows, is not at all practised,

course of the brooks, they say, is in general too
is practice. Some of the low meadows are liable
ods, and 400 acres on the banks of the Severn,
hing of Awre, are frequently flooded, though
by a sea wall, at great expence to the occu-

Cows are partly reared, a mixture of the Glou-
d Herefordshire breeds; when bought in, the
ire and Shropshire breeds are preferred, if the
designed for the butcher.

re chiefly of the Gloucestershire, Herefordshire,
t of Dean breeds.

are the Ryeland breed, lately much improved in
by being crossed with Dorsetshire and black faced
re rams, which increases the weight of carcass
considerably, though it deteriorates the latter in
but not in proportion to the increase of weight.
nd by experience, that, the wool of Ryeland sheep
neighbourhood of Ross, will, on these pastures,
ser and heavier, which is universally attributed to
ng kept better, and never housed.

Courses of Crops.

e light land, barley, clover two years, peas, wheat,
ry foul, summer fallow, and lime, for turnips,
clover one year, wheat. On the stiff land, fallow,
wheat likewise fallow, wheat, beans, wheat, and
barley, beans, wheat. Until within these 80
here was no wheat grown on the light soils of this
One tithing of stiff land, in the neighbourhood
ent (Malswick liberty) still goes by the name of
udding liberty," from having cultivated wheat, at

a time when the sandy soils were thought too light for that grain; these were chiefly appropriated to rye, and maslin; and there is still one tithing in the parish of Dymock, called the Ryeland tithing, that being in general a synonymous term for sandy land. The introduction of lime as a manure, and a better course of crops, has now, not only brought wheat into general cultivation, but produces it of a better quality than most that is brought to Gloucester market.

Manures.

Dung from the fold yards, in which the cattle are foddered in winter with straw, and from the ox-stalls.

Lime is here in very high estimation as a manure, both for arable and pasture land. In the common practice it is laid in small heaps on the arable land, to the quantity of two waggon loads per acre, if the land is very poor; if not, three loads to two acres, and spread, and ploughed in as soon as slaked. But in the neighbourhood of Newent, it is found that their best and strongest lime, which is burnt from stone on Gorsley common, requires a different management, the small heaps crusting, and not slaking properly; whereas, if put in heaps of a waggon load, or more together, it soon falls to a fine flour, digging out quite hot; this method is therefore followed in the best practice, though attended with additional trouble. It is thought equally beneficial on light and stiff soils, binding the one, and opening and ameliorating the other. This may be called a modern manure, in the district under notice. How far the repeated use of it may answer, will probably depend on a more general culture of turnips, and other vegetable crops, and the judicious intervention of dung and other mucilagenous manures. When used on pasture land, it is well mixed with soil, and is found very beneficial.

ficial. It is never unnecessarily exposed to the at-
phere, which is thought prejudicial.

Marl was formerly in great request, as appears by the
ber of old pits, but has not been in use in the me-
y of any person now living.

Paper's waste Ashes, once to be had for hauling, now
to 6*s*. a waggon load, principally used on grass land.

Oxen are much used in tillage, particularly on the sandy
. It is thought the canal now cutting through this
try, will, when compleated, be the means of re-
ng the number of horses, and bringing oxen into
ral use, by saving the road work.
rt of the district is inclosed with live hedges; some
is still common field. I am informed from good
prity, that between 300 and 400 acres of common
in the tithing of Aure, now let at about 10*s*. per
would if inclosed, be worth more than 25*s*. being
better adapted for pasture than tillage. This tithing
likewise a very rich common pasture of about 100
, which joining other commons, and, as is generally
case, being much trespassed and encroached on, is of
little use to the proprietors, but might by inclosure
ade very valuable.
he quantity of common and waste land in the district
nsiderable. The forest of Dean, now pretty much
ed of its timber, subject to common rights, and
derably encroached on, consists chiefly of stiff soil,
might, if appropriated, be converted to the purposes
riculture with very great advantage to the nation.

rse Lawn contains about 2000 acres, 1400 of which
ituated in the parish of Corse. The proprietors are
making application for an inclosure. A paper printed

and distributed by the promoters of this application, containing some very good reasons in favour of the inclosure, will accompany this report for the inspection of the board.

Huntley Common, a considerable tract of land, now of very little use, might by inclosure, be rendered very valuable to the proprietors and the nation.

Gorsly Common contains from 300 to 400 acres of land, chiefly on a lime-stone rock, very applicable for orcharding and corn, but in its present state nearly useless.

These are the principal waste lands in the district; there are other smaller tracts: these wastes, in their present state, are not only of very little real utility, but are productive of one very great nuisance, that of the erection of cottages, by idle and dissolute people, sometimes from the neighbourhood, and sometimes strangers. The chief building materials are store poles, stolen from the neighbouring woods. These cottages are seldom or never the abode of honest industry, but serve for harbour to poachers and thieves of all descriptions. Respecting the obstacles to the inclosure of these wastes, I shall beg leave to transcribe part of a letter from a gentleman, who has favoured me with much useful intelligence in this part of my survey. "I should think the great obstacle to the "commons, in this neighbourhood, being cultivated, "arises from their being, in general, the property of the "freeholders at large of each parish, any one of whom "has a right to tear up the fences when made; and, "whose unanimous assent it is impossible to obtain. "Hence land that is peculiarly proper for orcharding, as "being on a lime-stone rock, and will indeed bear ex-"cellent corn, affords, and that with difficulty, a bare "maintenance for a few half-starved rotten sheep, or "diminutive cattle. The expence attending an act of

"Parliament

ament is also so great, as to intimidate persons applying, unless where the common is extensive, the case in Corse Lawn. Possibly, the best step egislature could take, to encourage inclosures, d be, to have one general act, ascertaining the rtions according to each freeholder's separate pro-, and then leaving it to each parish, where there wastes, to inclose or not; speculative men would soon buy up the smaller shares, and there would nple scope for industry; whereas now, especially litigated bill for inclosures, no man can predict the ice, or even success. Another reason which pre- inclosures is, that perhaps the pasture belongs to reeholders, the soil to the lord; hence arises a dif- y in reconciling interests of so contrary a nature. rent commons also, are under different tenures; in some few instances such uncertainty prevails, legal determinations could alone settle the point. bly too, the state of the roads may induce some ns to avoid inclosures; roads over commons, have n much assistance from the surveyor, hence, per- in a wet season, fifty yards on each side the usual is cut to pieces, rather than be at the trouble of ng one good road in the middle. This is wretched y, but I fear too often the case. You will re- t also, that, a common is principally serviceable, ose only, who reside near it, and who can, there- have an opportunity daily of seeing their stock on Persons of this class, not unfrequently throw cold r on every scheme to inclose, as it appears to lessen own advantages, by making others joint par- s with them. They forget, that ten acres, well vated, yield a larger produce than a greater num- n a state of neglect."

il myself of the same respectable authority, for an of the orcharding and woodlands of the district.

" It

" It is, I believe, impoſſible to make any accurate cal-
" culation, with reſpect to our quantity of orcharding in
" this district, without an actual survey. The produce
" of the inferior fruits, being used as small beer, and
" the allowance to the labourer large, not less than one
" gallon per day the year round, and two gallons a day
" in harvest; the farmer is naturally anxious, to have
" as much orcharding as will supply him with a suf-
" ficiency, without his having recourse to the maltster;
" he will also, supposing he has cellaring sufficient,
" always keep a reserve; for it has been observed of late
" years, that there is not a hit, as it is provincially
" called, that is, the trees do not universally bear a good
" crop, above once in four years. Our prime fruit trees
" by no means flourish, as they formerly did; the old
" fruits are apt to canker speedily; and the different ex-
" periments of having grafts and stocks from Normandy,
" having totally failed, the idea has been taken up, that
" the land is tired of them, or in other words, that the
" particular pabulum necessary for the support of apple
" and pear trees, is entirely exhausted. It may be worth
" while to give Forsyth's recipe a fair trial; and were
" this done scientifically, I should have little doubt of
" its being as successful with fruit, as with timber trees.
" Very poſſibly, we do not take so much pains with our
" plantations as formerly. In my own remembrance,
" wine was seldom produced, but at superior tables, and
" then only occasionally. The principal gentlemen of
" the county rivalled each other in their cyders: but
" now, the case is altered; and cyder, and perry, are sel-
" dom introduced but at dinner, and then only for a
" draught, as small beer: after the cloth is taken away
" you must treat with foreign wines, or incur the im-
" putation of not making your friends welcome. Per-
" haps too, the method that has, I fear, too much pre-
" vailed in Devonshire, Gloucestershire, and Hereford-

, of doctoring the cyder, may have helped to have
ght it into disrepute. Still the high prices that
yet given for the high flavoured cyders and perrys,
mply sufficient to reward the planter for his pains,
osing he can afford to keep it by him, till a good
ket offers. I have known Mr. Holder of *Tainton*,
a hogshead of golden pippin cyder for twenty-four
ings per dozen, and the high prices which Tainton
sh, and Oldfield perry, bring at the mill, are
well ascertained to require mentioning: unfortu-
y, the planter, or husbandman, is too often obliged
t others reap the fruit of his labours, or of a
ge, for want of a proper capital, or want of casks,
of warehouse room. As in the woollen trade, so
e cyder business, the factor runs away with the
profit. About four or five factors, do all the
ess in this neighbourhood: they meet at Ledbury
appointed day, and settle with each other, what
shall give; this they uniformly adhere to, and
consequence is, that in a plentiful, or unplentiful
, the planter is little benefitted. The home con-
tion is small, he has no correspondence in Lon-
Bristol, or any of the great markets, and must
fore be contented, with what the factor offers.
few farmers go down to Bristol with their liquor,
there they meet with a fair price, far beyond
the factor gives, and which amply rewards them
heir extra trouble. I suppose you are well ac-
nted with the fact, that the Tainton squash perry,
basis of the principal part of the Champagne sold
e metropolis. Our trees are sometimes planted
pasture, sometimes tillage; the latter is, I be-
, the best for the trees, as it frequently stirs the
about their roots, but then, great care must be
not to injure the fibres. I understand, that an
well planted, is looked upon as equal in value

" to

" to an acre of the best meadow. With respect to the " soil, a sand is supposed to be the worst; a clay soil " to produce the richest, and limestone the strongest " cyder*. It is but seldom, that a liquor made from " sand will last long without turning acid. Stire apple " trees, planted at a distance from the forest of Dean, " never make as good cyder. I had forgot to tell you, " that our stocks are raised in a nursery, from a pro- " miscous mixture of apple and pear seeds; that to pre- " vent the tap root running too long, they are trans- " planted twice, or thrice; that when they are about " twelve or fourteen years old, they are removed to the " place where they are finally to stand, being then worth " about ten shillings per dozen; that in about three years " time, they are grafted, and in about five years begin " to be productive.

" All this district abounds with wood: there is near " a thousand acres, in the parish of Newent: Oxenhall, " Dymock, Hempley, Pauntley, and Bromsberrow, are, " I imagine, in full proportion. The principal part " is coppice, though interspersed thickly with timber " trees, oak and elm: the oak thrives most on the clay " soil, the elm grows almost spontaneously on the sand: " the coppice consists chiefly of oak, and ash, though plen- " tifully mixed with hazle, beech, sally, alder, &c. It " is suffered to grow according to circumstances, from " fourteen to twenty years; the prime part is devoted to " the lath, some to hurdles, hoops, &c. and the remainder " to cord wood, for the iron furnaces, at Powick, Lid- " ney, and Flaxley. Cord wood is now worth 10s. 6d. " and 11s. per cord. Bark has risen in the same pro- " portion; and the year before last was at the highest " price ever known: last year it fell, but still sold at

* The parish of Tainton, famous for the squash peas perry, is a stiff clay.

s. delivered at the water side. Some of our cop-
at fifteen years growth, sold in 1792 at 15l. per
The attempts to make iron with jut coal char-
ave not succeeded: the iron is too brittle, and
es wood charcoal; hence the neceſſity and ad-
ge of coppices.

" In answer to your enquiries, respecting the
f coal lately discovered at Borlsdon, near Newent,
s seven feet thick when they left off working.
great obstacle to continuing the works, was, the
of an engine to draw off the water. The property
at neighbourhood, is divided into small parcels,
robably is under the grounds of all the different
ietors thereabouts, and should any one person
a fire engine, he would drain the adjacent grounds,
ll as his own, and would of consequence, subject
lf to be undersold. To work the pits therefore,
vantage, either, a company should be formed, or
lations entered into by the neighbours, to make
ommon purse for the engine. We are now
to work the tunnel, and there is the highest
bility, that this will lead to the discovery of new
pits. In boring within a few yards of it, dif-
thin strata of coal were pierced through last
in the whole, about three feet thick within the
of twenty or twenty-five yards. The stone in
hill seems also strongly impregnated with iron

, in part of this district, have been low in money,
some part recompenced by an extravagant allow-
cyder, which has introduced very bad habits
the labourers, and occasioned great expence, and
nience to the farmer in scarce years of fruit. I
m respectable authority, that this abuse is now

likely to be rectified, and that the farmers in general, are curtailing the allowance of drink, and advancing the money price of labour. In one part of the district, the Tithing of Azure, the labourers are in part, or wholly boarded, a custom I have no where else heard off; in winter they have 12d. a day, dinner and beer; in summer 12d. and all their diet, or 18d. dinner and beer.

Draining. A little draining has been done, but it is not general; some of the low ground, and stiff arable land, suffers materially for want of proper grips, ditches, and water courses, to lay them dry.

Paring and burning, is not practised.

Roads in general, very middling, they look forward to the completion of the canal, for very great improvement of the roads, not only by easing them of much heavy carriage, but, for the supply of good mending materials, which are now, in many situations, scarce and distant.

Farm Houses and Offices, in some parts of the district, are tolerably good and convenient; in others, there is great room for improvement.

Poor's Rates, are more than doubled, in the memory of one person I enquired of, who seems clearly convinced it is more owing to vicious habits amongst the poor, than to any real neceſſity.

Tithes, in two instances, in different parts of the district where I made enquiry, are compounded for on very moderate terms.

Vermin. Rats and mice, do a great deal of mischief in this, and I suppose every other part of the kingdom.

Rat

ers, in general, are almost as great a nuisance; nost probable encourage, rather than lessen the f these destructive vermin. A plain and effica- for the extirpation of these destructive vermin, a great national benefit.

s are very much increased of late years, owing, to favourable winters, and more to the severity me laws, which deters many from carrying guns, formerly to amuse themselves by killing these small birds. If the annual mischief done he kingdom by these birds could be calculated, nt would astonish.

now gone through my survey, and ventured my ecting the present imperfections in the agricul- em of the county, and the proper methods to be their removal. If the Board of Agriculture ink proper, to print and circulate this Report the county, I hope the gentlemen in whose s put, will make their observations, and give the information concerning their respective neigh- s, and by that means render the account full and . One district I omitted mentioning in its proper e Southwolds, this is represented by Marshall, rmed by some gentlemen I consulted, to be ex- ilar in soil and management to the Cotswolds. ry distant from it, and having no acquaintance strict, I despaired of gaining any useful informa- d therefore did not attempt it.

THE END.

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